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FARM AND FIRESIDE

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A Visit With the Editor

A good dairy country is like a good dairy—sweet-scented, clean, orderly, quiet, germless, well watered, rich, equipped with modern machinery, fair to the eye and grateful to the nostril. I thought of this as I went from farm to farm across southern Wisconsin, from Madison to Mineral Point. The landscape, from horizon to horizon, seemed swept and garnished. Most of it was of a vivid green in color, with just patches of earth enough to lend variety to the scene and show that it is really a cultivated country.

It is the green of blue-grass, timothy and clover, and oats—all the green shades imaginable, from the darkness of the heavy clover to the tender emerald of the blue-grass in the bur-oak "openings" fenced up for pastures, and the bluish browns of the gone-to-seed June grass. Occasionally, like a blue-green lake, a field of rye rippled in shadowy billows to its shore at the woven-wire fence.

Everywhere, in this typical dairy country, one sees barns—great red structures—flanked with windmills and silos. The windmills are an almost unfailing feature of the farmstead, but the silos are not nearly so plentiful. In fact, the butter-maker at one coöperative creamery told us that there was only one silo among the patrons—and proprietors—of the creamery. These people make butter through the winter on a feed of hay, oats and corn, with no silage or roots. So, you see, a dairy country may have big barns, fine houses and general prosperity, and still have lots to do in the way of improvement. I think that the most pleasing thing about this splendid dairy region is the great successes made by half-way measures. We found not a single herd made up of pure-bred cows. We found only one where individual tests of cows have been made—not that there are not others; but we saw only this one, and did not hear of any more. And in a state which prides itself on the number of its silos, we found more farms without than with them.

The Wisconsin dairymen have learned one lesson well, however, and that is the benefits of coöperation. All the creameries visited, and the cheese factories as well, are coöperative. When they were founded, the stock was sold out to farmers—and to no one else—and the establishment opened to the trade. Any farmer can bring in his milk, whether he owns stock or not. A certain percentage of the output, or a flat rate per pound of product, is charged for doing the business, and this is made high enough so that a dividend is paid at the end of the year as profit.

Where the Farmers are the Capitalists

At Mount Horeb we were informed that dividends running well toward a hundred per cent. had been paid, but last year, on account of some improvements, the dividend was cut down to something less than ten per cent., I believe. The West Middleton creamery is paying from thirty to fifty per cent. dividends per annum. You see there were lots of farmers who were afraid of a stock company and stayed out of the deal. They send their milk in, however, and the fellows who put up the money for the plant are getting their rake-off in the form of these comfortable dividends. We heard of one creamery that had shut down—probably there are some thorns on the creamery rose-bush, but from what we saw, the rule would seem to be that a good coöperative creamery pays the market price for butter-fat, and pays for itself besides in dividends, in from two to eight years—depending on the number of suckers in the neighborhood who are afraid to come in. The Mount Horeb creamery when we were there was getting on track at the railway station three eighths of a cent a pound above Elgin price for its butter, and cutting out all middleman's profits. The three eighths of a cent above Elgin quotations was for the trouble of putting it up in prints. It's clean profit, earned by intelligent, businesslike methods. Everything in this country looks, tastes, smells and analyzes clean and sweet.

The opinions of the people are divided between cheese-making and butter-making as to profitability; but, whichever is adopted, they seem able to have the big red barns and the fine modern houses. We took pictures of the "improvements" on one side of the road from Mount Horeb to Blue Mounds—the good and the bad, the thick and the thin—and if they come out in distinctness meet for half-toning, I mean that you shall have a look at them some day, just to show what dairying does for a community. The cheese factories are coöperative, as well as the creameries, and the middleman's profits reduced to a minimum. Mrs. Greenwalt, who presides over a fine dairy which sent about seventy tons of butter-fat to the creamery last year, said that she wished they had a cheese factory. Mr. Peter Nace, who gave us the finest dinner—or, rather, Mrs. Nace did—which we had on the trip, said that he preferred to send his milk to the creamery, though he could patronize a cheese factory just as well, and was convinced that he could get twenty-five cents a hundred pounds more for his milk at the latter place. He thinks the skim-milk worth that much more than the whey. Mr. Charles I. Brigham of Blue Mounds reckons his skim-milk worth twenty cents a hundred—evidently he rates it a little lower than does Mr. Nace.

Cows and Cost Accounting

Mr. Brigham has a beautiful place consisting of several hundred acres of hill and dale at the very top of the state of Wisconsin; but he has only about a hundred acres of plow land. He is a fine example of the scholar on the farm, living the rural life because he has not the physical strength to do educational work for which he was trained. He probably doesn't make as much money as some of his neighbors would if they had his chance, but he knows what he makes, and that's more than lots of them know. He is making exhaustive and accurate reports to the Department of Agriculture as to the labor, capital and land values of his farm, and one of these days we shall have bulletins covering these matters.

Do you know what it costs to keep one of your cows a year—feed, stabling, pasture and labor—all of the cost factors?

Of course you don't.

But Mr. Brigham has all the figures on that from the department. He furnishes the facts, and they work out the result.

"Would it pay you to keep these exhaustive accounts, Mr. Brigham?" we asked him. "As a financial proposition and leaving out of account the researches of the department?"

"No," said he, "it wouldn't. I couldn't do it unless I kept a clerk just for that alone."

But, he says, in his opinion, it would pay every farmer to weigh each cow's milk and test it, and to keep as close account of her feed as possible without actual weighing.

They have many cow-testing associations in Wisconsin, the members of which do this very thing, but the only one found was the One-Man Association of Charles I. Brigham.

Dr. William Hill of the University of Chicago said to me last winter that in his opinion every department of farming has been more accurately worked out than the economic end—that is, the actual figures of costs and expenses. Farming is done on a basis of guesswork which would ruin any other industry. Mr. Brigham's talk to us discloses the fact that this is to some extent necessary, as things stand now. The farmer can't know to a dot what things cost him to produce, because the work of weighing, measuring, tabulating, setting down and calculating would require a bookkeeper, who would do for the farm what the "statistician" does for the manufacturing plant.

And the farm business isn't big enough to stand the expense.

Well, one of these days, the work of such men as Mr. Brigham and the coöperation of the Department of Agriculture at Washington will have resulted in a lot of worked-out facts which may enable the farmer to know pretty well where he stands, not from his own "statistics," but from the reports from many farms analyzed by the trained economists at Washington.

We can take a table of feeding values, now, and make out a balanced ration from what we have in the barns and cribs, or find out what to buy if we haven't the right feeds on hand. Sometime we may have sets of tables from which we can tell what on the average it costs to keep a cow on land of different values, with feeds at certain prices, in stables of varying costliness and when labor is worth so much per month.

It seems possible. Mr. Brigham's reports cover every phase of his farm work, from eggs to ensilage. Thousands, perhaps, of other farmers are making similar reports, from the Pacific Coast, from New England, from the South, from the irrigation projects, from the semi-arid belt, from the corn belt. The results will be worked out this year, next year and perhaps for a century. Occasionally a progress bulletin or a book on certain phases of the great subject of What Pays on the Farm, and Why? will be issued. It is a great work, and if carried on long enough and intelligently enough, it ought to be of immense value to the farmers. It will bring statistics to the statisticless.

Coöperative Bookkeeping—Why Not?

So much for government help. But why can't the farmers of a certain neighborhood coöperate in hiring a statistician to keep the books, receive reports, work out costs and show the owners of each farm where their losses are and where their profits. Some things are paying Mr. Brigham, which he thought unprofitable before he began to get down to brass nails. So it is on most farms. All over the nation cow-testing and hen-testing operations are carried on with great success. Why not form farm-testing associations and work the business of farming out to a fraction of a dollar, for each neighborhood and for each farm? One good statistician, with a talent for figures and a taste for outdoor life, could keep track of a lot of farms. Here's a new business for the right sort of fellow, that of neighborhood bookkeeper and farm statistician. How would you like to be tested? What's sauce for the dairy ought to be sauce for the dairyman. Where's the progressive farm neighborhood that will start off with it?

This southwestern Wisconsin was a grain country twenty years ago, and was grained to death. The fields, they say, were failing in fertility. Farming did not pay. Nobody knows just how well it pays now, but that it does is proven by the looks of things. One man who was born on the farm on which he lives assured us that the yields of crops are better now than they were a quarter of a century ago, and as good as they were when the soil was virgin. For the past twenty years crops have been getting better and better. This is the result of the adoption of methods that are only fair, and might be greatly improved, but which include a rotation running through four or five years, in which there are one or two years of clover, and in which everything, broadly speaking, on the farm is fed to cows and live stock. The clover-field, the dairy and the manure-spreader have restored fertility to these green, clean, prosperous farms.

The Holstein is crowding other cows out—she gives so much milk for the pigs. One man has a nice herd of Brown Swiss, and is enthusiastic. Mr. Brigham has Jerseys, and likes them, but thinks of changing to Holsteins because the neighbors have Holsteins. And that brings me to another topic on which the Wisconsin live stock people have something to teach the rest of us—coöperation among breeders. But that's enough in itself for one visit. Did you ever think what a waste of effort is involved in each farmer in a locality having a breed different from that of his neighbors?

Robert S. Squire



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More Stories of Abandoned Farms

Clover Rotation in Illinois

A FARM adjoining ours was owned by an old couple whose children had all married and left them. It was rented from year to year, almost everything taken off and very little manure put back. The land was farmed in grain, mostly wheat and corn. Part of it was hilly; this was plowed straight up and down the slope, and every spring regular ditches were washed between the corn rows.

Finally the land did not produce well enough to tempt renters to take it, and the owner decided to sell. A young man, who was raised in the neighborhood and knew about the farm, bought it at forty dollars per acre. Though land around it was worth double that, everybody thought this place was dear at the price.

The first thing the purchaser did was to repair the house. He moved the barn to a better location and put on a new roof and siding. He then set out a new orchard—the old one was too old to bear.

Now for the land. He first put most of the level land in wheat, and clover was sown upon the wheat, giving a very good stand. He then hauled straw from the old stacks and filled all the washes on the side hills, even using his hands in fixing the worst places. I don't think I ever saw a man get down on his hands and knees to stop washes in land before.

He then manured the slopes and broke them shallow, plowing crossways of the corn rows, and sowed cow-peas. They grew well, and when they were in bloom he plowed them under and seeded to grass. The fields that were hilly and broken were then fenced and sheep pastured on them. The level land was rotated first in clover, then grain. Five years later corn on this ground made sixty bushels per acre. Last fall he decided to sell (after owning the place seven years), and he got eighty-five dollars per acre. He not only made money while on the place, but built up one of the worst run-down farms in Illinois.

Opdyke, Illinois. CHARLES H. TUCKER.

Cow-peas and Clover Succeed in Tennessee

MY ACQUAINTANCE with this farm dates back to 1873. At that time it was almost virgin soil and would produce sixty bushels of corn and other crops in proportion. The owner was old and soon became unable to work it. His son then commenced on the one crop idea, planting corn with little variation, using a turning-plow for everything, ridging up his land to the corn and leaving it in that shape all winter to wash away. Parts of the land he only tended every other year and let them lie out and wash between times.

In 1905 the farm would not produce over twenty bushels of corn, and oats were a failure. He had to sell out. The place was purchased by a hustler who began at once to sow peas, and to save every ounce of manure and put it on the land—the former owner had let it wash away in the spring branch that ran through the lot. He also cleaned out the upland that had grown up in briars and bushes, and seeded it down to grass. Land that would not bring twenty bushels of corn an acre five years ago will now produce sixty, and oats and wheat in proportion, cropping every year, too. This restoration was brought about without using commercial fertilizers, by the right use of the manure produced on the place.

The new man has built wire fences, painted his house and built a good barn. Any one who had seen the farm five years ago would not know it now, and it has been self-sustaining, too.

Tennessee.

Bettering a Bit of Vermont

IN THE year 1895 we purchased what was practically an abandoned farm. The former owner, who had paid five thousand dollars for it thirty years previous, had let it go back on a mortgage of less than two thousand dollars. This man had never been able to make the farm profitable, though he had ten children to help him in his work—girls and boys—even his wife taking a turn at the outside labor. Early and late, with little chance for rest or pleasure, they toiled—and just as soon as they were old enough the children deserted the farm for the city, where in his youth their father had run a saloon before coming onto the farm. The

habits formed at that time may account in a measure for the dead failure he made on this farm.

Judging from all appearances, the only improvement he put on it in those thirty years was a barbed-wire fence around the boundary, and he was forced into that by constant trouble with his neighbors.

I well remember what a discouraging sight the place was at first. The man into whose hands it had come was finding it a "white elephant" and he offered it for two thousand dollars on easy payments as well as offering to loan all that was needed for the most pressing repairs. My husband only consented to take the place after much persuasion on my part, and he could hardly believe, even when things were beginning to look hopeful, that our venture had really been a success.

The first five years were very trying ones. As if the struggle to repair and build up the house and barn with as little expense as possible were not enough, a series of misfortunes overtook us. A valuable team was spoiled. One of the horses had to be shot, the other was lame for life. Anthrax broke out in our dairy, taking two fine cows before we learned what the disease was, and only strenuous measures saved the others. However, we did not give up, though, as I look back, I wonder we did not.

Help was high and hard to get. And, in order to give my husband a lift, I marketed all the produce I could possibly handle. A separator and small horse-power were bought the second summer. The power also did the churning as well as cut the ensilage in the fall. We

Deep Plowing and Manure in Alabama

CANNOT you recall, in every community, the immense amount of farm land there is lying unused? Some of us naturally think that this land is not fit for a graveyard, but I know from experience that such land can be made as fertile as any.

Some years ago my father moved into a new community. Not being familiar with the land, he rented the poorest place thereabouts. It consisted of one hundred acres of hillsides and ditches. It had the reputation of having been in cultivation since Adam was a boy. Our neighbors told us that not less than four families had starved to death on this place, but my father seemed determined to take hold.

When springtime came, we had all the ditches filled up and we began to prepare the land. This was no easy job, for the ground had grown hard. The oldest inhabitants came out to look at the field, and went away sagely shaking their heads.

"That land will produce nothing," said they. "You are breaking it too deep."

Well, harvest-time revealed the fact that the land had made twice as much as before. How was this done? At first we broke the land good and deep, and then put a heavy coat of manure on it. That's all we did to it.

Later we decided to buy the place, paying twelve hundred and fifty dollars. We cultivated the land as we did the first time, and after owning it one year sold it for two thousand dollars. So you see something really can be made out of this abandoned land.

Madison, Alabama. GEORGE CAMERON.

Lime, Clover and Manure

ONE of the best farms of this section was once so badly run down that many people thought it worthless. There was not enough raised on this forty-acre place to pay taxes and keep one cow without buying feed. Even the poultry looked as though the farm did not raise bugs enough for them to live on, and the swine looked as though they could reach through a post-and-rail fence and root out the third row of potatoes on the other side. The fences were dilapidated and so grown over with briars and weeds that you could hardly see the fence at all.

Such had been the condition of this farm for at least ten years before it was sold, about eight years ago. It was bought for about twenty-eight dollars an acre. Lately one hundred and twenty-five dollars has been offered. The house has been beautifully remodeled at very little cost, and a new barn put up, forty-two by seventy, which scarcely holds the crops raised on this farm to-day. Many other buildings have been added, and now from the road the place looks like a small country town.

The methods that redeemed this farm were good plowing and thorough cultivation. Some of this ground was so stony that I saw as many as one hundred loads of stone taken off a four-acre field after the first plowing. The owner uses very little commercial fertilizer. Lime and manure with clover plowed down furnish all the fertilizer this farm needs to develop good crops. Wheat goes about twenty-five bushels per acre, oats forty-five, corn ninety.

Pennsylvania. H. C. K.

Potatoes Paid for Tiling

I HAVE in mind a farm located in northeastern Ohio, which, because of bad management, was scarcely able to produce half a crop. Four years ago it was purchased by a young man who had a little start financially and great executive ability. He went to farming a three-year rotation, corn and potatoes, wheat and clover. Each spring he tilled what he plowed, placing the drains forty-two feet apart. His wheat and potato money went for corn, which he fed horses. One of his early purchases was a manure-spreader. Last year when the ground was frozen he manured his wheat and clover, at other times his corn and potato ground. By the beginning of May, 1909, he had his whole farm manured. His wheat went thirty-eight bushels per acre. The year before he bought the place was a specially good one for potatoes, but the crop only yielded some ninety bushels per acre. Last year was not a very good potato year, but our hero made a hundred dollars per acre above the cost of the tile on the eighteen acres he had in that crop.

W.



The Home on the "Vermont Hill Farm." The Owner is Holding His First Grandchild. Grandmother Stands in the Door

put in a good silo about the first thing when we decided on winter butter. Few farmers tried winter butter then, and our silo was among the first in town. Engaging our butter by the year to certain customers proved very profitable.

One of our first moves was to set out a good variety of fruit-trees suitable for this section. We have as a result all and more than we can use of pears, apples, plums, cherries, as well as small fruits for which there is ready sale. The old trees on the place, after a good trimming, also yielded a quantity of most excellent fruit. Most abandoned farms abound in old orchards, and, too, there is usually a good supply suitable for setting grafts.

While I cannot say our three hundred acres of land, partly woodland, has ever raised any wonderful crops even with all our care, it has after a little given us a good income, paid off the debt and left a sum ahead. It is an isolated rocky farm, but it is our own, and we enjoy it. The view is fine, as it is apt to be in Vermont hill farms, and our house and grounds are attractive, as our village friends prove by accepting our hospitality quite often. Our years have been busy and perhaps overworked, but it has left us time for a bit of church and social life. We have, since there was time and money to spare, considered it money well expended to take a vacation and enjoy ourselves once in a while, as well as to have plenty of good reading matter, especially on farming lines. Abandoned farm life need not be all hardships.

A FARMER'S WIFE.

Vermont.

The Education of the Colt

Break Him by Teaching Him—By David Buffum

It is as true of our colts as it is of our boys and girls that in their development and education a great many mistakes are made. They are misunderstood; driven when they ought to be led and led when they ought to be driven; often cruelly punished when not to blame, or allowed to defy us with impunity when wholesome correction is needed. But there is less excuse for these errors of judgment when dealing with colts, for, although we might, perhaps, be supposed to understand human nature intuitively, we most assuredly do not; and, as equine nature is less complicated than human, it is easier to learn to understand it.

In a previous article I have pointed out some of the limitations of horse nature, the horse's way of reasoning almost wholly from experience and how all really scientific training is based upon taking advantage of these limitations. In the case of the unbroken colt, two other things should always be remembered: First, that horses are, by nature, timid animals and, second, that in a natural state they are gregarious in their habits. When, therefore, we put a lot of straps and buckles on a colt, of the use of which he has no comprehension, and essay to drive him, alone and separate from his kind, among trolley-cars, automobiles and other objects that would naturally terrify him, it will be seen that we are straining his nature a long way from its starting-point and that we should make due allowance for the fact.

The best time to break the colt to harness is when he is from one to two years old. Of course, if broken at this tender age, he is not—especially if a road horse—fit to be put to much work when his education is completed, and care must also be taken not to injure him in the process; but he seems to learn more easily and is easier handled than when he is older, and, once well broken, he can be again turned out to pasture with no danger of forgetting what he has learned.

Early Breaking is Easy Breaking

To those who have had much experience in this line, the advantages of breaking young are so manifest as to require no argument. There are some, however, who admit it freely, but do not practise it through fear of hurting the colt. There is no danger of this, if the matter is gone about as it should be. Of my own colts, for instance, I never had a single one injured by early breaking. On the other hand, it is almost always much harder to break a nearly-matured or fully-matured horse, though, of course, this varies with different individuals, according to breed, temperament and disposition. A few years ago a fine five-year-old mare, a beautiful animal, trotting-bred, was brought to me to be broken. She had cost her owner considerable money and he told me he was so choice of her that he did not have her broken earlier for fear she might be injured in some way. She was handled carefully, but she was large and strong, and her temper none of the best, and before the job was finished coercive measures had to be used. And if her owner could have seen the stiff fight that she put up when certain straps and rigging were put on her, I think he could hardly have supposed that she was in less danger of hurting herself than if handled when younger.

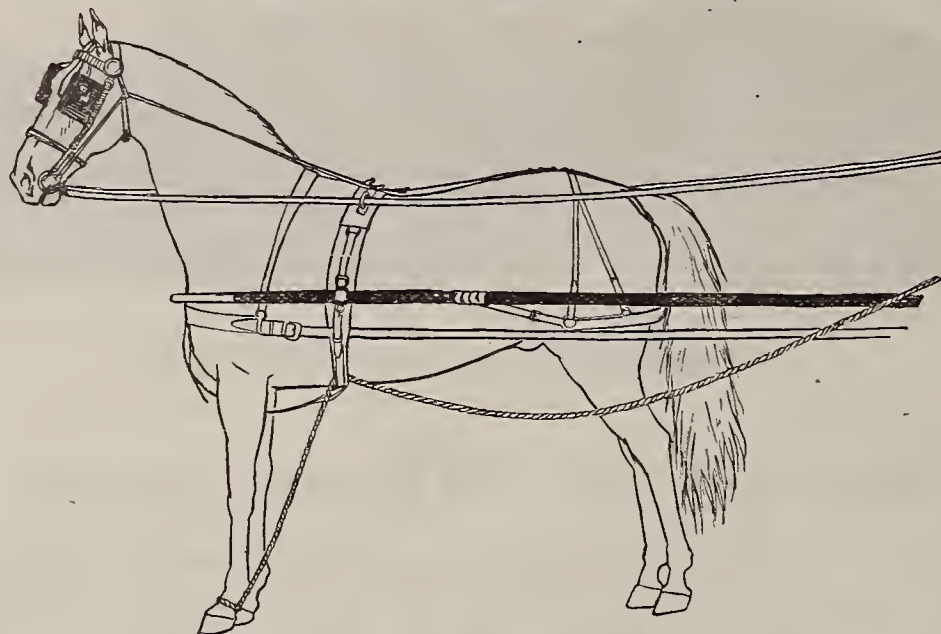
I might multiply examples, for I have handled quite a number of fully-matured horses that, for some reason, had never been broken. As I have already intimated, if the horse is naturally tractable and gentle, it makes less difference at what age he is broken. But it is pretty hard to tell beforehand just how a colt will act when being broken, and it is a principle recognized by trainers of animals of all kinds that the training is best done when the animal is quite young.

Before taking up the details of breaking let me lay down two important rules:

First—Always have all your rigging so strong and well-adjusted that the colt cannot, by any possibility, get the advantage of you.

Second—Make your lessons short and of frequent repetition.

The philosophy of the first rule will be apparent, I think, to all who have read my observations on the horse's nature in previous articles. For that of the second, with the colt, as with the child, the too-long lesson wearies him and benumbs his brain; it is the frequency of successfully administered lessons that makes the strongest impression on his mind. But, remember, they must



The Foot-Line—You Have the Means of Stopping Him by Placing Him Upon Three Legs

be successfully administered. If you have a difference of opinion with your colt, persevere until he yields to your will; then at once cease training and put him up in the stable with the impression of your supremacy and his submission fresh in his mind. Be very gentle with him now, make him as comfortable as you can, give him a little hay and, as soon as he is cool enough, a little grain. Then, after a couple of hours, take him out and repeat the lesson. He will yield much quicker this time; and if the rule is faithfully followed, it rarely requires more than three or four lessons to make his obedience both prompt and implicit.

Remember that, as a general thing, the colt does not fail to do your will from any inherent desire to oppose or defy you, but because he does not understand what you want. The whole thing is new and meaningless to him. The average colt will do cheerfully what you want him to, provided only that it is made clear to him what it is, and also that he has nothing to fear. But there is so much difference in colts, both in natural docility and in quickness of perception, that all cannot be handled alike, and if you have a colt that seems rather stubborn and slow to understand, your cue is to require but very little of him at a time—and stick to that little till you gain it. Then, at the next lesson, require a little more. Indeed, by following this rule, little by little, one thing at a time and oft-repeated lessons—you may often break a rather refractory colt in less time than you could a more promising pupil if cruder methods were to be used.

The first step in the education of the colt is biting. In this matter some strange notions seem to have got afoot and some weird and curious machinery for carrying them out. I remember, when a boy, seeing a colt wearing an imported "bitting gear" that held his head rigidly in a strained and uncomfortable position, throw himself down in sheer pain and desperation, while his breaker—a bull-headed Englishman, imported, like the "bitting-gear," and master of stables for the colt's millionaire owner—looked calmly on and observed, "E's a bit stubborn, but 'e'll give hup bimeby."

It is such brutal performances as this that, in greater or less degree, have always disgraced the profession of horsemanship, and although there has undoubtedly been some improvement in such matters the strange idea is still held by many otherwise sensible people that the most finely-formed and delicately-organized of all our domestic animals should be intrusted to the care of the ignorant, the coarse and the stupid.

Now what is the process of biting for? Simply to teach the horse to obey the rein and yield, in a proper degree, to the pressure upon the bit. And to do this you need no "bitting gear" imported or otherwise and need go to no expense beyond the purchase of a piece of cotton

rope the size of your little finger for the first lessons, and for later ones a common jointed bit, rather thicker than usual at the ends.

For the first series of lessons proceed as follows: Take the cord (which, to serve all your purposes, should be about twenty feet long) and make a fixed loop in one end of the right size to go over the colt's head and fit, pretty snug, where the collar is worn. Carry the end of the cord forward, on the off side, pass through the colt's mouth, and back through the loop on the near side. Now pull gently but firmly upon the cord and his mouth will be drawn back toward his breast. Hold for a few seconds, then release and presently repeat. Continue these exercises, with an occasional respite for rest, for ten minutes or so. Then put him up in the stable and after an hour or two repeat the lesson. The object of this treatment is to teach him to give up to pressure on his mouth and also to render his neck flexible. The lessons should be repeated, at intervals, for several days, until he gets used to them. You are now ready to put on his bridle.

For this purpose all you need is an ordinary bridle without blinkers. The bit, as already stated, should be thicker than usual at its ends, as such a bit is easier and much less likely to make the mouth sore. If it cannot be procured at the stores, a skilful blacksmith can make one; in such case, see to it that the work is nicely done and the bit finished perfectly smooth, for otherwise you will lose more than you gain. Tie one end of your line into the near side of the bit, hold the other



"Pull . . . firmly on the cord and his mouth will be drawn toward his breast"

end in your hand and, with a long buggy whip, make the colt go around you in a circle. Shift to the other side from time to time, making him go around the other way. In a few days you can harness him and drive him about the yard, using your cord for reins.

To get a colt nicely bitted is an important part of his education, and it should be carefully done. It should not be hurried too much, and if the colt's mouth begins to get sore, wash it frequently with dioxygen.

The colt's first lessons on the road should be in double harness beside some old and perfectly gentle horse. In this way he more easily gets accustomed to the sight of the revolving wheels and the other novel features of the situation. After a half-dozen lessons of this kind he will be ready for the breaking-cart. This should have long shafts, and it is better, for at least the first few lessons, to have a foot-line on the colt. This need be nothing more nor less than the same cord you have used in biting him, tied to one fore foot before the fetlock, passed over the girth and back into the cart. With this, if the colt tries to kick or run away, you have the means of stopping him at once by pulling up his foot and placing him upon three legs; and it has this additional advantage that, while it greatly disconcerts him and robs

him of his self-confidence, it does not hurt him nor rouse his resentment. I have known horse-breakers to object to it on the plea that it may throw the colt down; but I have used it many years and have never known this to occur or any other injury to result from its use. The controller (described in a previous article), of course, affords an equally certain means of control and on some specially intractable colts it may be found useful. But in ordinary cases, where the foot-line is merely a safeguard and is not for the correction of any confirmed vice, it makes a little less rigging to put on the colt and is fully as satisfactory to use.

A great many colts are spoiled by the breaker being in too great a hurry to get them into a four-wheeled vehicle. The colt should be used a long time in the breaking-cart and got thoroughly handy before harnessing to a buggy; then there is little danger in it.

As a general rule, one is liable to be a little too anxious to get the colt to work. Quite aside from chances of overstrain, in the case of animals that are broken when immature, it is safer to let the colt acquire his working habits gradually.

It is hardly possible and perhaps needless for me to take up all the minor points in breaking, in one matter, however, I think I should say a few words, and that is in teaching the colt to back. I have often heard breakers say that "it takes a year to teach a colt to back properly," whereas it can be readily taught in half an hour and I have often taught it in ten minutes. I may perhaps be excused for pointing out that there is some difference in ten minutes and a year. The best time to teach it is early in his training, before he has been harnessed to the cart.

Showing the Colt What Backing Means

Standing behind the colt, with the reins in your hands, pull back strongly but steadily upon them, saying "Back, back." Of course, the colt does not know what you mean, and he bears hard against the bit, often with his legs straddled out and resisting your backward pull as hard as he can. In a little while, however, to relieve himself from the painful pressure on his mouth, he takes a reluctant and half-unconscious step backward. This is what you have been carefully watching for; and at the very instant that he shows this partial yielding to your will, release the pressure on his mouth. Now repeat it; he will respond a little quicker this time and you cannot be too careful to release the pressure the instant he complies. In this way, in a surprisingly short time, you will be able to back him any distance you please.

Now the great difference between this method and the methods (if so they can be called) that are generally practised is that, in this, you have shown the colt just what you wanted him to do; while in the lesson, as it is usually attempted to be taught, the colt can hardly suppose otherwise than that his trainer is trying to drag him backward by the reins—a thing that he naturally resents and that the trainer is manifestly unable to do. That, in spite of such crude methods, the majority of horses do learn to back, is proof of their high intelligence, for they have learned what has not been taught them in any sane or rational way.

And this brings me to a matter of which I have often thought—the fact that despite the crudity and, too often, the barbarity of the methods employed in training, the great majority of our colts grow up into good, useful horses, just as the majority of our boys and girls, despite the many mistakes in their training, grow up into good, useful men and women. It has been said that this is owing to the grace of God, rather than to any wise management on the part of man; and in a certain sense, this is doubtless true, for, by the term, we must understand the grace which underlies all physical and social evolution, causing the survival of that which is fittest and best and the ultimate domination of good over evil. But bad handling nevertheless causes a great deal of evil that would not otherwise exist; it is cruel as well as unscientific and responsible for nearly all the vices that are formed by horses. And when we reflect that the horse, our inferior in intelligence, is unable (except in a very limited way) to learn our language, it is clearly up to us to learn his, and, when we wish him to do any particular thing, to show him, in a way that he cannot fail to understand what it is that we require of him.

Around the Farm

Items of Interest and Value to the Progressive Farmer

Buckwheat Before Grass

BUCKWHEAT is usually considered very hard on the soil. Some think it poisons the soil for other crops. While the buckwheat crop is a heavy feeder, grows rapidly and matures a crop in about sixty days from seeding, my experience of some fifteen years does not indicate that any more damage is done the soil than if as many pounds of plant-food had been removed by corn or some other crop.

Buckwheat-growing on a soil tends to loosen it and this is an advantage to some soils. The buckwheat leaves the soil practically free from weeds and it is the best crop with which to sow grass and clover that I have ever tried. By the time the buckwheat comes off the young grass and clover has got a pretty good start and then there is nothing to interfere with its growth in the fall.

I have a field that was seeded to timothy and clover with buckwheat last July. The soil is free from old half-rotten weeds and practically free from young weeds. It is mellow and just in the right condition for the young grass to grow, and it is growing rapidly in spite of the extremely dry weather that prevailed in this part of West Virginia during the early spring.

I have made a practice of turning my wheat stubble, that I wanted to set in grass, as soon after wheat harvest as I could and sowing it to buckwheat and grass. In this way I get a better stand of grass on a cleaner soil than I do when the grass is sown in the wheat. I get enough buckwheat to pay me for the trouble of plowing, sowing and harvesting the crop. In this way the annual weeds do not seed as they would if the grass was sown with the wheat and they were not cut before seeding. If there are dewberry-briers on the land, the vines do not have so much time to grow and are held in check by mowing.

A. J. LEGG.

Circumventing Poison Ivy

POISON oak is a shrub rising from one to three feet in height, the California variety growing still larger until it forms regular thickets. Poison ivy or poison vine is a running or climbing vine. Both plants bear their leaves in clusters of three, and contact is very poisonous to some persons. Contact is not always necessary, as proximity will sometimes affect.

The plants will affect at any season of the year, but are most active while in foliage. The flesh of the affected person swells and the skin becomes closely set with small semi-transparent pustules which burn and itch with such violence as wholly to rob the patient of rest. The contact of the clothing and scratching which the patient is sorely tempted to perform with force breaks up the pustules, which then exude a fetid serum that will convey the poison to parts not yet affected.

The juice pressed from the green leaves of the nightshade, sugar of lead, dilute ammonia and copperas are each effective remedies, but hydrogen peroxid in the case of most persons, will destroy the poison by a single application.

W. HOLTON PEPPER.

FOR years poison ivy has been the bane of my life. I have been told of so many "sure cures" that I have lost faith in them. Truth to tell it is not an easy thing to cure on me and must usually run its course, and at times I have been laid up a couple of weeks with a solid welt or scab all over and eyes swollen shut. Some of the best remedies I have found were the camphorated sweet oil, also sugar of lead dissolved in spirits of niter. The latter is painful for a bit after applying if one has scratched much.

As was said in a FARM AND FIRESIDE article last fall, the active principle in the ivy being acid, any alkali is inclined to neutralize it, but what will help one person seems to be no good for another.

After all, "an ounce of prevention is worth a pound of cure." Let persons who are immune to ivy poisoning work where it is. Get such a person to grub and pull out all the roots, keeping at it year after year till it is eradicated.

A couple of years ago I had to mow where there were literally beds of poison ivy. Almost everybody else available poisoned easily and as I was no better than they there was nothing for it but to go in it. Ordinarily it would have almost

killed me, but that time I escaped with only a very few watery blisters on my hands. This is how I did it:

I procured plenty of sweet oil and in the morning before going to work rubbed my body all over and my legs, arms and face with sweet oil, then put on a clean suit of gauze underwear and clean socks. At night when I came home my wife had a large pan of water hot as I could bear my hands in. With the hot water and soap I washed all over thoroughly and then put on clean garments. The next morning I repeated the anointing all over with sweet oil, put on fresh clean underwear and socks, and at night repeated the bathing.

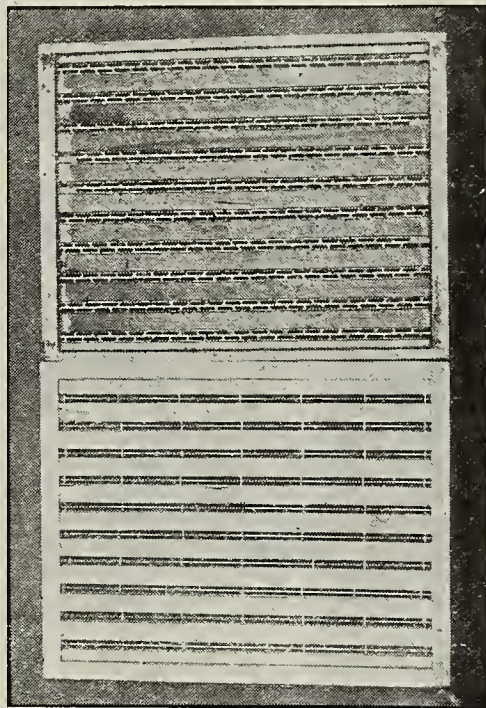
The changing of underwear and applying of sweet oil mornings and washing it off at night serves to catch and remove the minute dust that causes the irritation without its coming in contact with the skin. It makes lots of washing for the woman and is some trouble night and morning, but no one who has suffered from ivy poisoning will mind the trouble.

JAS. D. BOWMAN.

Fencing Out the Queen Bee

THOUGH a few extracted—liquid—honey producers claim to be able to do without queen-excluders, most beekeepers producing this kind of honey find excluders indispensable.

With me and most others, if an upper story of extracting combs is put on, the queen will enter and lay eggs in it. I have always considered it a bit nasty to extract honey from combs containing unsealed brood. If the pockets of the



Queen Excluders—Old Style, Zinc (Above), and New Style, Wood and Wire

extractor are revolved so slowly that the larvae are not disturbed, it will take more time to throw out the honey. Now, time is money, especially with hired help demanding present wages. I consider it cheaper to use queen-excluders than to fuss with a super full of combs containing brood.

Of the various kinds of queen-excluders in use, perhaps the best is the wood and zinc excluder. It consists of strips of zinc, punched full of holes of such size as to let worker bees, but not drones and queens pass through, between strips of wood. This is the most expensive, but also the most rigid excluder. It does not bend down in the middle and thus destroy bee spaces, as sometimes is the case with excluders made of a single sheet of zinc. Single-sheet excluders have one advantage—they give more holes per square foot than the wood and zinc sort. This makes it easier for the bees to ventilate the top stories during hot days or when hives are not shaded.

Another form of excluder is made to be used directly on top of the brood frames, but they are difficult to remove when once glued tight by the bees.

Recently another excluder has been put on the market. Instead of the strips of zinc between the strips of wood, galvanized wires, held the correct distance apart by small pieces of metal, are substituted. This gives much more space for the bees to pass through. A prominent honey-producer of Michigan thinks that during some seasons the swarming

tendency of bees is increased by the excluders hindering free communication between upper and lower stories. That to some extent would be overcome by this more open excluder.

I have only one fault to find with these wood-and-wire excluders or, rather, with their patentee and manufacturers—they are nearly again as expensive as the ordinary kind.

Comb-honey producers should be able to do without excluders. Queens very seldom go up to lay into sections when there is a full set of combs below. When, however, the brood chamber, for reasons that cannot be detailed here, is contracted to five or six frames, all fairly prolific queens will deposit eggs in the sections. Here, then, excluders must be used.

Queens will also lay in sections when there is no drone comb in the brood chambers. Of course, queen-excluders are a remedy. There is, though, another less expensive way—to fill sections with full sheets of foundation. In this case, there being no chance for the bees to construct drone comb, there will be no incentive for the queens to go above.

Some bee-keepers do not object to the hatching of drones in the sections, as such sections, after the hatch, are filled with honey and sealed. Such sections ought not to be put on the market. After a bee has emerged, a fine cocoon is left in the cell—not a fit thing for human mouths to chew.

Another case where an excluder must be used is when a swarm is put into an empty hive, and a super at once put on top. If the super contains drawn out comb, the brood nest will be established in it. The excluder forces the bees to establish the brood nest below where it belongs.

F. A. STROHSCHNEIDER.

Weedless Pastures

PASTURES to be most profitable must be permanent. The greatest drawback in maintaining permanent pastures is the spontaneous growth of useless weeds and grasses. As most of these weeds grow from the seed and as the seed mature in the fall, it is evident that the pasture must have especial care at this season. If, however, a perfect catch of pasture grasses is secured at the start and the same is not too heavily pastured while very young, there will likely be very little trouble from weeds. If the weeds should get a start, and if they are of a variety that the stock will not keep picked down, the only thing to do is to keep them mowed down if the pasture is expected to do its best.

If the land is smooth enough, the cheapest way is to use the common mowing-machine, but if it happens to be rough and stony the next best thing is the hand mowing-blade. I always watch my pastures closely and if a growth of weeds is seen coming on, I mow it promptly and as many times as is necessary to prevent the weed-seeds maturing.

Often in early summer when work is crowding this work of mowing the pasture is neglected, and if such should be the case, late in the season is usually a good time to mow, as the stock generally have the grass pretty well eaten down then and good work can be done at getting at the weeds without loss from mowing down grass. But if the work is not too crowding, I always give my pastures, if they begin to show signs of foul growths, a good mowing early in the summer, and the mulch of cut weeds and grass seems to help hold the grass through the dry season.

If bushes have been allowed to secure a start in the pasture—a thing, however, which should never be allowed—the best way to subdue them is to cut them down a little below the surface of the ground and keep the subsequent sprout growth carefully shrubbed off. I do not like to grub up bushes in the pasture because so much grass is destroyed and, besides, it leaves a depression in the ground. Bushes can be shrubbed several times with the same amount of work required to grub them once and the work is just about as effective.

The early fall is the proper time to attend to reseeding spots that have an insufficient stand of grass. The young grass sown this spring, in particular, will need reseeding in spots this fall. I harrow such places closely before reseeding and if the spot is very small, I have it thoroughly scratched up with a sharp-toothed hand rake.

R. B. RUSHING.

Asked and Answered

Notice to Inquirers—Only a few answers, which cover subjects of general interest, can be placed in the paper. Letters of inquiry should, therefore, be accompanied by a two-cent stamp for a reply by mail, and should always give the writer's full name and post-office address. Names will not be published without permission.

A reader at Thayer, Indiana, asks: "What kind of grass-seed would you advise me to sow in brushy woods?" Orchard-grass, as it thrives best of all grasses in shade. It is a standard domesticated grass and the seed may be got of any seedsman. It is a useful grass for many purposes. But if there is a heavy growth of underbrush in this forest, we do not think a stand of any grass can be established.

J. C. B.

A subscriber at Meyers Falls, Washington, asks in regard to crops for newly-cleared land. It is very apt to be in an acid condition and not favorable at once to many crops. Then, too, local conditions have much to do with the treatment of the land. As it is but a small piece of land, I would suggest garden vegetables if you have plenty of rainfall or irrigation. You can probably grow root crops such as beets, carrots, rutabagas and, possibly, sweet corn. But actual experiment is better than guesswork. Certainly you should be able to grow potatoes.

W. F. MASSEY.

A Spout Spring, Virginia, subscriber is puzzled because a hive of his bees has gone three years without swarming. There is nothing unusual in the fact that your hive has not cast a swarm and, in fact, there is a distinct gain, for when a hive swarms, all prospect of future surplus is gone, as the working force goes out with the swarm and by the time the old hive is strong again the flow is over.

Perhaps a swarm came out during your absence.

By all means transfer your bees from the old box hive to a modern hive, as you can better keep tab on them in a modern hive with movable frames.

DR. D. E. LYON.

A Jackson, Ohio, subscriber has some land which has been tiled, but is still "spouty" and sour. He has used ground bone and phosphate, and asks whether lime would help. If the land is "spouty," it is because the drainage is still imperfect in spite of the tiling. That should be attended to first. Drain-tile becomes more effective after two or three years than when first laid, as freezing and the passage of water makes little channels which assist tiles in drawing off the water. Perhaps this land will become better drained of its own accord if the tile has been recently laid. For sweetening the soil or correcting acidity, use two or more tons to the acre of finely-ground limestone—carbonate of lime.

J. C. B.

R. R. W., Moorefield, West Virginia, wants to get the whole place in grass and not cultivate any crops.

I have made permanent grass with success in the Virginia mountains with a mixture of ten pounds of orchard-grass, five of red top, and ten of tall meadow oat-grass per acre. If you want grass, you must seed heavily. The red top is used because of its value in the second crop with the orchard-grass.

In order to make and keep a good sod it must be taken care of. You cannot eat your cake and keep it, too. You cannot mow the hay year after year without running the grass down in product, unless you feed it. An annual top-dressing of raw bone-meal is an excellent thing to maintain the productiveness of a meadow.

The same applies to your blue-grass sod. As for reseeding that sod, Japan clover (*Lespedeza striata*) is a very valuable summer pasture legume. It has spread all over the South, but its northern limit is reached where the season is too short for it to ripen seeds and reseed itself, as it seeds late and is killed by first frost. You can get the seed from parties in Louisiana who advertise it, and might try it on the sod. But the best thing would be to reseed it with Kentucky blue-grass after running a disk lightly over it. Then roll it tight, and hereafter give it the top-dressing of bone at the rate of two hundred pounds per acre and it will pay you well.

W. F. MASSEY.

Always keep the right end in view; the farmer's business is to grow crops, not to kill weeds



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Gardening---By T. Greiner

Second-Crop Seed-Potatoes

SOUTHERN-GROWN second-crop seed-potatoes have the reputation of making especially satisfactory seed for Northern planting. I believe their superiority is due mainly to the fact that the tubers are not overripe or perhaps scarcely fully ripe and will usually keep in far better condition for planting than our own home-grown potatoes. I have tried to raise second-crop seed-potatoes here in New York, using the Early Ohio, as one of the earliest, for this purpose. For a number of years I have grown the first crop under glass, but even then I have hardly ever succeeded in getting the new potatoes, taken from the greenhouse bench already in early May, to start again into growth for a second crop, and I have concluded that our seasons are not long enough to grow "second-crop seed-potatoes."

But I have accomplished the same result by holding well-preserved potatoes (Early Ohio) until along in July, perhaps even the first of August, then planting those in the best condition—that is, sound, plump and nearly dormant, free from long sprouts. From these I have grown a very late crop of potatoes, to be kept for seed purposes only. At planting-time again I reject every specimen showing premature growth, and, continuing thus, I know I have improved the vigor and keeping qualities of my strain of Ohio—a potato that is one of the best keepers, anyway.

Trouble With Roses

A Minnesota reader reports trouble with her three-year-old rose-bushes. The tops were winter killed, but new sprouts have come up from the root, and these do not appear to bloom.

You might be able to see for yourself whether the new shoots are the same rose as the old bush, or whether they come from the manetti or wild rose used as a stock on which the cultivated kind was top-worked. If the latter was killed down to the wild stock (supposing that your rose-bushes were propagated in that way), then you might as well dig up the whole bush and get a new one. The manetti is a strong grower and quite hardy. Sprouts coming up from it, from below ground, are usually very thrifty, much more so, of course, than the cultivated rose that was top-worked on it, and will not show the same tendency to bloom as the other. The bloom is single.

How Many Bushels of Seed-Potatoes?

M. W., of New Richmond, Ohio, asks how many bushels of potatoes it takes to plant an acre. That is hard telling. It depends on how they are planted, whether in check rows, about three feet apart each way, or in rows, the hills fifteen or eighteen inches apart in the rows; whether you plant large or small seed pieces, single eyes or whole potatoes; whether the seed-potatoes are large or small, etc. The range is from six to twenty bushels.

We usually calculate from twelve to fourteen bushels per acre. My experience is that I secure a larger yield by using plenty of seed than by planting small seed pieces. I never plant single eyes when I can get seed-potatoes at ordinary prices or have plenty of my own.

How to Fight Melon Blight

The same reader says he has melon-vines, and when they first come up they begin to wilt and then die. What can be done for them?

I am in doubt about the real cause. Sometimes grubs and other insects attack and injure the young plants. Try to get some tobacco-dust and scatter a good handful over each hill. If it is a bacterial disease, very little can be done, anyway; if a fungous disease, then spraying with Bordeaux mixture or a very dilute commercial lime-sulphur solution might do good or it might not. I usually spray, anyway; on general principles, so to speak. Of course, I add arsenate of lead, and usually manage to save my plants at least from injury by beetles.

Early and Late Cauliflowers

J. E. W., of Litchfield County, Connecticut, asks why he cannot raise good early cauliflowers. They do not head well in the summer, although he grows good ones in the fall.

That seems to be a very general experience, and yet I usually have very fine heads in summer. In order to get them, we must plant the best seed of early sorts obtainable and set the plants early, at the time when we usually set early cabbage-plants for a first early crop. In that way we can get them to head in July and before the arrival of the dry weather in August. We shade the heads, either by breaking or folding the big outer leaves over the head, or by placing an inverted wooden (picnic) plate over it. Cauliflowers need plenty of moisture and rich soil. If we can give them a light dressing of nitrate of soda, soon after they are planted out in early spring and another a couple of weeks later, all the better.

It is pretty hard to get good flowers in August and early September if the season is a normal one, which means a hot and dry one.

We Like Winter Radishes

Most people like good winter radishes. We usually have them in September and October, from open ground, and from the cellar afterward. We are not particular as to varieties. The Spanish are perhaps a little stronger than the mammoth White California or Russian winter radishes. But we would eat one as soon as another, so long as they are brittle and juicy. It is quite easy to raise them. There is always a little spot somewhere in the garden where we can sow a row of winter radishes; for instance, the spot where we had lettuce or early peas or early beets or early cabbages or even early potatoes. Sow a packet or ounce of winter-radish seed, and have many feasts on it in the fall. If you have a surplus, a neighbor may want them for a consideration. I would not advise my friends, however, to put much dependence on the much-advertised Sakurajima, or Japan Giant, radish, except as a curiosity or for trial.

Sowing Seed for Green Onions

J. O. P., of Ohio, wants to know the proper time to sow onion-seed to raise bunch onions for market. I sow from middle of July, to first of August, perhaps even up to near September might do in the inquirer's locality, or further south.

Get seed of the Silverskin or White Portugal onion. You may also try Vau-girard, or White Winter. Any of these are fairly hardy and will give deliciously sweet and tender green onions in early spring. Sow seed rather thickly, say at the rate of twenty pounds to the acre. Make the rows twelve or fourteen inches apart. Wheel-hoe and weed them, but do not thin. Thus let them go into the winter. You will be pleased. Of course, the ground must be very rich.

Lime for Cabbages

T. W. L., an Ohio reader, asks whether dusting his cabbage-plants with hydrated lime will kill "black fly and aphids." Lime in any shape will do no harm, at any rate. If enough is used on the soil, it may prevent club root. But it is not likely to be of much benefit as a remedy for plant-lice. Better try tobacco-dust if you can get it. It will drive the flea beetles away and kill the lice with which it comes in contact. Or spray with tobacco-tea, or whale-oil-soap emulsion, etc. Try to hit the plants from the under side as well as from the top.

Fill the Vacancies

You may have empty spaces in the rows of other vegetables, especially mangel beets. These we always grow to some extent for stock, and especially for poultry during the winter. Prepare the vacant spots nicely with the hoe and drop a few seeds of early table beets, flat turnips, winter radish or perhaps other things. Why waste the land and opportunity? Plant something! Or set out late cabbages or cauliflowers—anything you can make use of.

Seed-Peas and Worms

The question of how to keep seed-peas from worms will not down. Now it comes from Mrs. E. H. C., of California. Get a small can of bisulphid of carbon. Put the peas in a tight vessel. On top of them set a saucer and put a little of the drug in it, cover them up tightly and leave the peas to themselves for twenty-four hours or more. That will fix the worms. Take care to have no flame near bisulphid of carbon. The fumes are explosive.

Some Legume Questions

FAR too little value has been conceded to sweet clover for forage purposes, because stock often do not relish it at first. No better forage crop for general purposes has yet been found than alfalfa, and no forage plants richer in protein than vetch or soy beans. Yet my cattle grazed everything off the ground closely around a patch of alfalfa then just beginning to bloom, without touching it, also around stray and thrifty growing vetch plants. They also refused soy bean forage when it was first placed before them. Yet when they became better acquainted with alfalfa they took to it readily, and also learned to eat and enjoy vetch and soy beans, both freshly cut or wilted or as hay. The old sweet-clover plant, after it has gone well along toward seed-production, is, of course, unfit for cattle food. A lot of tough woody stalks is about all the animals would get. But young sweet clover looks so near like alfalfa that it would be difficult to distinguish them. The bloom, however, tells at once what it is. Both plants are nearly alike in nutritive value. If cut at the proper time there is no doubt that animals will eat and enjoy sweet clover as much or more than many other forage plants.

Vetch as a Fertility Maker

"What is the best orchard cover crop?" was one of the questions asked at a recent New York State horticultural meeting. Without hesitation Prof. John Craig, horticulturist at Cornell University, replied: "Winter vetch."

Winter or "hairy" vetch, if given half a chance, will reseed itself from year to year. This spring I plowed up a patch that was in potatoes last year, and had been in rye and vetch a few years ago. This land was quite green in spots from the vetch plants that had started from seed still in the ground last summer or fall after the period of cultivating the potatoes. The growth of vetches has been so immense, in some patches, that neither man nor beast could have waded through without being tripped up or entangled in the vines. And you should have seen the masses of nitrogen-bearing nodules on the roots. Here we have a hundred pounds of nitrogen, and perhaps more, per acre, snatched from the atmosphere, nitrogen worth at least seventeen to eighteen cents a pound, therefore not less than seventeen to eighteen dollars worth on the acre. The stations may tell us a still bigger story. It is big enough considering that the vetch furnishes in nitrogen alone the equivalent of six hundred or more pounds of nitrate of soda and a wonderful lot of humus. All this means life and energy to the soil.

Fact and Fiction

Yesterday a neighbor asked me for my opinion about nitro-cultures. He had tried to grow cow-peas, and made a failure of it. Now he thinks of introducing the cow-pea bacteria into his soil. In this nitro-culture business you will find a grain of truth, and many pounds of fiction, and exaggeration, and even fake. There are some things about nitrogen-bearing bacteria not yet fully understood. There seems to be considerable mystery as yet about their first generation and transformation. Will one kind of bacteria—for instance, that on common clover—finally adapt itself to work on sweet clover or alfalfa, etc., or has each plant its own kind that must be introduced into the soil before that plant will develop root nodules? Who knows?

I have grown clovers of all sorts, alfalfa, vetch, soy beans and cow-peas, besides, of course, field-peas, garden-peas, sweet peas. In a limited way I have experimented with nitro-cultures. But our soils here seem to be so well provided with bacteria of all kinds, that whenever any of these crops were planted on good soil, they gave good yields, and in all cases the roots were well supplied with the characteristic nodules.

Undoubtedly there are soils lacking the bacteria working on some or all of these crops, and for them the artificial introduction of the particular bacteria of the crop to be planted may be desirable. For me to make any effort whatsoever in that direction would be like carrying coals to Newcastle. I believe there are bacteria enough in the soil of this farm to infect every acre of land in the state with the bacteria working on clover, alfalfa, vetch, peas, soy beans, cow-peas and probably a lot of other legumes. Before you spend money and effort with nitro-cultures, make sure that your soil has not already all that and more than it needs.

Fruit-Growing—By Samuel B. Green

Questions About Grafting

A MICHIGAN fruit-grower raises several interesting questions in a recent inquiry regarding stocks for grafting.

The growth of trees is governed a great deal by the seedling stocks upon which they are worked, and yet it does not govern entirely, since the tops of trees start into growth largely without regard to the growth of the root. For instance, the common cultivated large apple is much later in starting into growth in the spring than the true Siberian crab; yet when this apple is grafted upon the Siberian crab, it does not seem to advance its flowering time, but will affect the growth made during the season. The same is true of pears grafted upon the quince, and growth during the whole season is much slower and smaller than that of pears grafted upon pear seedlings.

It pays to be very careful in selecting seedlings on which to graft. If I could choose the kind of seedlings I wanted, I would select those that were vigorous and hardy and resistant to disease. In practice, however, it is customary to select seeds from the cider-mill or the canning-factory, where fruit from vigorous varieties is being worked up. In the case of peaches, nurserymen generally prefer to get the wild seedlings that grow abundantly through portions of Tennessee and Kentucky.

The subject of the best kind of seedlings upon which to graft trees is such a wide one that it is hardly possible to go into it in these columns, except as the result in specific inquiries. The sweet cherry is generally grafted upon the Mazzard, and the sour or Morello cherries upon the Mahalad. These are wild cherry stocks. Seedlings of the standard Morello, Bigarreau or other cultivated cherries may also be used. The wild red cherry, commonly known as pin or bird cherry, has been used as a stock for the cultivated Morello sorts, but I do not think successfully on a large scale.

Apple and cherry seedlings get large enough to bud or graft in one year. In fact, cherry, plum and apple seeds planted in the spring, if vigorous, generally may be budded in August. This is the rule with peaches. Apple-seedlings are generally root-grafted in the house in winter.

If fruit-trees are making a good growth, I would not fertilize; but if the growth is weak, then encourage it by a fertilizer. But there is nothing to be gained by fertilizing trees until they grow top-heavy; in such a case, too, they are liable to make a late growth in autumn, which is very liable to winter-killing.

Trunks of Apple-Trees

Andrew Hallum, Whalan, North Dakota—I do not like to have the trunks of apple-trees as high as five or six feet, for the reason that, so much of the stem being exposed, it is liable to sun-scald in this climate; also, in severe winds, the fruit is liable to fall off when so far from the ground. In New England, it used to be common to raise trees so that horses could pass under them without the top of the hames striking the lower branches; but I think it a poor plan for Minnesota and adjoining states.

The Hibernian is an excellent tree for top-working, since the branches make good unions with the trunk, and the tree is hardy and free from disease. Some of the large-growing crabs are also good for top-working. I do not think the true *Pyrus baccata* of much account.

Alsike clover is the hardiest of our large-growing clovers. As a rule, it is a poor plan to sow clover between the apple-trees and to use this land as pasture. However, there is no objection to sowing some alsike on the land and pasturing it off in a small way; but where the land is light or sandy, much better results will be obtained by keeping the soil cultivated nearly all the time, perhaps seeding it down occasionally to retain the moisture in the soil.

The Ounce of Prevention

A Delaware reader has a mixed orchard that was sprayed last spring, before budding, with lime-sulphur wash. She does not think there is anything wrong with them, but wants to keep them healthy and asks if they should be sprayed again this year. It is very difficult to answer a question of this kind. I think, however, that your peach, plum and cherry would hold their foliage longer and ripen the wood better if they

were sprayed with Bordeaux mixture a couple of times this summer, though if we have a good season perhaps nothing will be gained by it. I take it your orchard is a small one, and it is quite likely that if spraying is being done in the neighborhood, you could hire it done at little trouble and expense. In such a case, I would advise spraying.

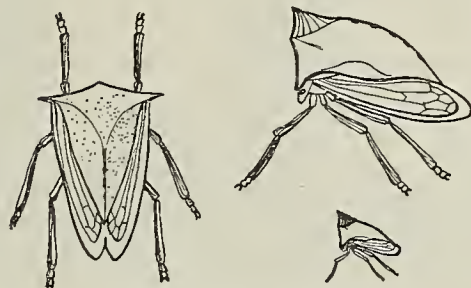
Your one peach-tree that has a few small reddish-yellow spots on the leaves, but not a yellowish appearance of the whole tree, is probably attacked by one of the peach diseases, such as yellows or little peach, and since, if you are to keep your orchard free from peach yellows, you must be very rigorous in excluding trees that have the disease. I would recommend that if the disease seems to increase, the tree be dug up and burned.

The codling-moth attacks the fruit of the apple and pear, and the curculio plum, peach, cherry or apple fruits, but neither is injurious to other portions of the tree.

Bordeaux mixture does not keep indefinitely, and should be made up fresh every day. There is always a possibility of any fungicide being ineffectual, due to the fact that it is applied after the disease has worked its way into the tissue of the plant, where it cannot be destroyed. It is really a preventive and not a cure, and is not effective against such diseases as apple blight, peach yellows and little peach.

Buffalo Tree-Hopper

A subscriber in Preston, Idaho, sends on an apple-twig infested with what is known as "Buffalo tree-hopper." This is a funny-looking little insect that very much resembles an enlarged grain of buckwheat, but is not quite so large as a pie-plant seed. It does not feed on the apple-wood, but uses it merely as a place in which to lay its eggs. It is a very difficult insect to destroy and I know of no practical remedy except that of prun-



How the Insect Looks

At left, top view, enlarged. At right, side view, enlarged, and, below, natural size

ing off the infested wood so far as may be and burning it, to destroy the eggs; but, of course, this is quite impracticable where the older wood is infested, as is sometimes the case.

It generally happens that a pest of this sort will be troublesome for a number of years and then there will be years in which we will have comparative immunity from its ravages. This is the first time that it has been reported to me from Idaho. It is very common, however, to have samples of this insect and its work sent in from Nebraska, Iowa and adjoining states. The eggs are laid about midsummer or a little later and the insects hatch early the following summer. It has been suggested to spray the trees as the eggs are hatching with kerosene emulsion or whale-oil soap, but it is not an easy matter to find just the right time. The orchard should be well cultivated and given every encouragement to outgrow the injury.

Guard Against Blackberry-Rust

Several subscribers in different parts of the country have inquired about the same disease—red rust of blackberries. When you find a blackberry-plant in your patch, the new leaves of which are curled up and imperfect, and a sort of yellowish green, you may suspect that it is infested with this disease, which a little later will show its characteristic form, a brilliant red powdery deposit on the under side of the leaves. The leaves will then curl even more and the brilliant coloring will be very conspicuous.

This disease is sometimes very troublesome, and on this account one should be very particular as to the source of the plants which are set out. This disease attacks not only the blackberry, but the black raspberry and dewberry. The only satisfactory treatment is to pull and destroy the infested plants as soon as symptoms appear. If this is carefully attended to, it is quite easy to keep the disease in check.

Wintering Perennials

R. H. A., Nebraska—The plan of carrying perennial plants over in cold-frames is, all things considered, far better than carrying them over in the cellar. There is very little expense in this matter, unless you are growing them on a very large scale, and even then I am inclined to think it best to use cold-frames.

Uniform Berry Packages

ONE of the striking facts of the berry season every year is the astonishing variety of fruit packages which the consumer finds in the market. Boxes and baskets of both wood and paper, square, flat, oblong or flaring, some quart boxes short, and some shorter, combine to make a medley which is confusing to the buyer. It is also a puzzle to the grower, and a cause of positive loss, when he changes his style of package. Really the grower need not do this if he makes proper preparations, but sometimes he is forced to when in sudden need he is unable to find his preferred style and, therefore, must take whatever the dealer has to offer.

Often in small shipping towns, where there are only perhaps half a dozen growers, there will be found as many styles of packages as there are men. This can be nothing but detriment to the business, because it prevents the interchange of boxes and crates which might often be of great advantage. Such unnecessary diversity can be prevented by cooperative buying. In many places this system is now in practice.

Cost is saved by bulking together orders for packages, and uniformity of packages also improves market conditions. If all the growers of even a small neighborhood were so well organized that their supplies could be bought through one agency, in a course of only a few years it would be an advantage of great value.

R. B. RUSHING.

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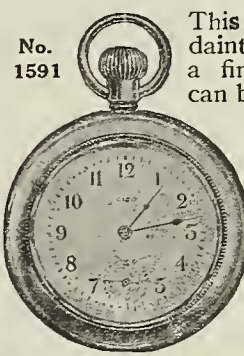
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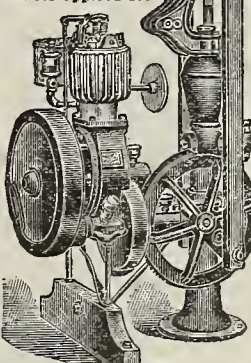
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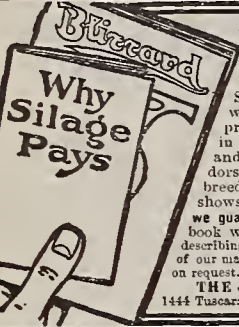
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Practical Poultry-Raising

The Poultry-Yard in July

IF AMONG the growing chickens there are any bare-skinned ones, these should be separated and placed in a small clean pen where they are fed special rations. A mash consisting of bran, seven eighths; linseed-meal, one eighth, and skim-milk is fed twice a day, and whole wheat and corn in equal parts once each day.

On the average truck farm it becomes necessary to confine the fowls to prevent damage to maturing crops. Rather than turn the flock into one large pen, it is better to divide the plot in three parts with poultry wire, each plot having been sown with clover or some other cover. As the occupied section becomes foul and trodden, the fowls are turned into the clean section. The rations during confinement should contain beef-meal in the proportion of one tenth to the bulk of other food. Corn should be fed not too heavily, wheat and green food in abundance. Grit and charcoal and plenty of drinking-water are essentials.

Growing fowls should have a separate set of pens to insure them against being trampled by the others.

M. ROBERTS CONOVER.

Check Losses, Reap Profits

QUITE a number of people have asked for more particulars about my work in the poultry-yard. The little bunch of poultry I carried on one of my experiments with last year consisted of twenty-six pullets. They were good Barred Rock stock, but none of them would have captured a high prize in a feather show. My outfit of tools consisted of a few home-made contrivances of my own invention that did the business quite as well as fancy tools costing ten to twenty times as much.

My experiment began December 1, 1908, and it ended December 1, 1909. During that time they laid four thousand seven hundred and thirty-two eggs; three hundred and thirty-six dozens of these were sold, at an average price of twenty-two cents a dozen. Of the twenty-six pullets I set twenty-three on thirty eggs each. Three did not want to set. Six were set at one time, six at another, five at another and six at another. Each was given fifteen eggs. The chicks were removed as fast as hatched the first time, and fifteen more eggs, warmed, were placed under the hens. The hens, then, set six weeks continuously, and not one rebelled. They got out six hundred and forty-four chicks. Of these I lost nine and raised six hundred and thirty-five. They were pushed along as rapidly as good feed would do it, and the average weight when sold was three pounds and four ounces, and the average price for the lot was forty-two cents each. It will be noted that the price received for eggs was rather low compared with prices in many parts of the country, and the same might be said of the chickens. And yet they will appear somewhat high to people living in the back sections where eggs are traded for calico and groceries, and chickens go at any old price.

The cost of feed for the pullets was twenty-three dollars and sixty-six cents, and for the chicks seventy-six dollars and twenty cents. There appears to be nothing remarkable about these figures, yet in summing up I find that the pullets yielded a profit of nine dollars and twenty-six cents each. Of course, if one wants to go into little details and charge them with cost of attendance, credit them with value of manure, and so on, the figures would vary somewhat, but I have noticed that on all farms, attending to the poultry is considered a "chore," and interferes very little with the real work of the day. If one is raising poultry for a living, it is a different matter. Whatever profit he makes over cost of feed is the wages he gets for his labor and time.

It will be noticed in all the much-exploited "systems" that the remarkable profits and sumptuous "living" figured out is made by selling eggs for hatching, baby chicks and fancy breeding stock at sky prices. Not one poultry-raiser in five thousand can expect to obtain the prices given or anywhere near them. A person buys the second or third grade stock of a breeder who has made himself famous by spending thousands of dollars in advertising and costly write-ups, and advertises it as the stock of said breeder. He can sell some eggs and breeding stock, but all experienced poultrymen are well aware that the stuff offered is not high class and therefore the new fancier must put his prices down very low to get any trade at all. Business comes slowly and he soon gives place to others who are trying to work the same old wires.

In my experiment my constant aim was to keep expenses down and to avoid all loss of chicks, and my success in these matters largely accounts for the excellent profit per hen. Most people appear to think they are doing well if they raise two thirds of the chicks they hatch. One woman writes me that she invariably has good hatches, but between the time the chicks come off and are well feathered they drop out of sight one after another. Rats, cats, "bird dogs," storms and accidents get away with them, and in some localities various wild animals annex them and before they are matured nearly half are gone.

Many people make great preparations for hatching the eggs and brooding the newly-hatched chicks, and that is as far as they go. After the little fellows are fairly well feathered they are allowed to run at large and begin to mysteriously disappear. The chicks mentioned in my experiment were confined in a small yard shaded by apple-trees until they were marketed. I have a little bunch of pullets now that have never been outside the yard they were raised in. They were hatched in July, began laying in December, laid all winter and only two of the flock of thirty-two have become broody. I broke them up by placing them in a shed with a male, and they are back in the yard.

I have found it costs little more to raise chicks in a yard than on open range, and the loss from mysterious disappearances is next to nothing. They have all the grain feed they can eat before them all the time, and all the water, grit, shell, etc. But every time I go past the yard I take along something I can pick up handily and throw to them—scraps from the table, lettuce, clover leaves or blossoms, potato-peelings, anything they are likely to eat—and they go at them as if they never before had tasted anything so good. I have run a quantity of nice clover or rape through the feed-cutter and thrown it over to them and they would devour it until their crops stood out like walnuts. I have thrown them a mouse and they would almost have a general fight over it. Last summer a small garter snake essayed to cross the yard and he had about the roughest experience a snake could meet with. He was nearer dead than alive when he got across.

Poultry-raising on the farm has been carried on in a sort of a hit-or-miss manner. If everything went on right, there was a profit in it. If things went wrong, there was only loss. The way to make it profitable is to make things go right. When you get the chicks hatched keep them under control until they are well grown. Keep them where you can handle them at all times. Don't buy "stock-foods" at great prices. The best poultry-foods grow on the farm. Corn, wheat, oats and clover are the best of all. Other grains and seeds may be added in limited quantities with profit. And above all things keep down the red mites and lice. They are as bad as rats in destroying poultry profits.

FRED GRUNDY.

Scalded Vermin

EVERY time after I am through washing I put all the water in the boiler and let it come to a boil, then by painful carry it to the hen-house. With a dipper I throw it all around and up in the corners, into the seams and cracks, and all over the roofs, and let it run down. It is surprising how the little mites come down in the water. It also cleans the house. Two or three washings like this will clear the house of any insects. Then I powder the hens with a good commercial lice-killer and dust the nest with it, and my hens are left quite clear of lice.

MRS. J. E. R.

Chick-Fattening Secrets

THOUSANDS of farmers lose money every year by failing to prepare their chickens for market, the same as they do their other live stock.

The strong, healthy, growing chick exercises so much that the fat cannot accumulate among its tissues, the nutrition taken into its body being converted into bone, sinew and muscle. It is evident, then, that close confinement is the first step in the fattening process.

When the birds weigh one and one half to two pounds, we separate them from the regular flock and confine them in a close shed, the south side being as open as possible, to admit fresh air and sunlight, both of which are essential to best results. Never confine fatteners in a dark pen, nor where ventilation is poor.

There is of course no unvarying rule in the matter of the size and age which chickens should attain before they are given the final fattening. In general, chickens of five pounds or over fatten less cheaply than those of smaller growth, but even mature birds can be given a final finish that pays. This matter of when to begin fattening has chiefly to be governed by what your local market wants.

We keep everything scrupulously clean about the fattening-shed—floor, roosts, feeding and drinking vessels. Dampness must be guarded against. Keep the droppings well cleaned out. All damp or moistened food should be fed in vessels, not on the floor, where filth sticks to it and is thus taken into the chicken's body.

Skim-milk is one of the principal articles for fattening the chickens. We provide a special vessel in which to give it, and a separate one for water. Take care that the latter is ever present, for you are wasting time and feed if the water-supply is neglected.

Fattening chickens require even more grit than laying flocks. We keep a box or vessel of it where they can have free access to it. If it is supplied regularly, they will not eat more than is good for them, but if it is given them haphazard, now and then, they eat it so ravenously when they do get it that often injury is done. I do not believe in mixing grit with the feed. Commercial grit may be the best, but we have good success with common sand, always trying to choose that with sharp, clear crystals and little dirt.

We notice about how much feed the fattening chickens will pick up clean, then give them that quantity each meal, slightly increasing the amount, of course, as the birds grow. If sufficient feed is given to keep it before them all the time, some of them will consume more than is good for them. Then, too, feed is trampled over and wasted. We feed the fatteners three times daily. The morning meal is table-scraps and wheat. At noon a mash of boiled potatoes or peelings, mixed with bran or shorts, is given, milk being used to mix the feed. We also season this with a sprinkle of salt and a pinch of cayenne pepper. Adding a teaspoonful of soda for every twenty-five birds, every other day, is beneficial, while plenty of charcoal promotes health. At night, we give all the whole corn the birds will pick up, tossing in a little more after they have gone to roost, so that they will have something to eat if they fly down before we get around to feed them the next morning.

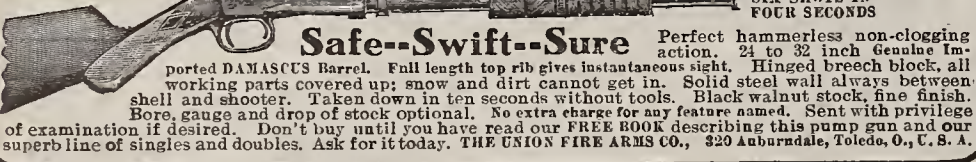
We pen the birds in flocks of twenty-five. Don't overcrowd the fattening-pen! After you have learned about what they will eat, be regular in feeding. You can thus finish them for market in a shorter time and save feed in the bargain. Again, don't feed too long. If young birds are properly fed and cared for, ten days to two weeks from the time they are put on full rations they should be disposed of, as the gain in fat and flesh will not pay for the feed consumed after that. Of course, with old or run-down fowls, this time-limit would necessarily have to be extended, but even then we would give a somewhat lighter ration than above mentioned till the birds are ready for the crowding process, then keep them on full rations for the allotted time.

M. A. COVERDELL.

Don't depend too much on pastures to keep chicks growing and fowls in good condition. The chicks, even on large range, should be regularly fed to keep up their growth, and as for the fowls the same may be said.

Mistakes will happen; we cannot avoid all of them. But each stumbling-block should be noted and the lesson so firmly fixed upon us that it will not happen again. It is old but good advice to endeavor to profit by our failures.

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Live Stock and Dairy

Best Breeds and Crosses For Mutton and Lamb

IT WILL be well to bear in mind on entering on this subject that our purpose is to try to impress on the occupiers of mixed arable and pasture farms the great opportunities which the breeding and feeding (in the most part, with their own produce) of sheep and lambs for mutton offer them. Prices for this class of farm produce have, for nearly two years, been abnormally high; but in view of the ever-growing popularity of mutton and its scarcity, as compared with other meats, there is no reason to fear that they will, at any time, cease to be remunerative.

The big ranchmen of the middle and of the great ranges of the far West from long experience have learned how best to make the sheep business pay. But wool is, and must be, their mainstay; and they know that their distance from the markets of Chicago, Kansas City and the great cities of the East; the nature of the various crosses they have to use so as not to impair the quality of their wool, and the difficulty of obtaining the labor they would need to grow the highest quality of mutton on their vast ranges, all tend to preclude their competing with the farmers of the middle West, South or East. Only the neglect of these latter men to avail themselves of the bonanza offered them can induce the ranchers to try seriously to compete for this trade.

We, therefore, need not include in our discussion the breeds that are most popular on the ranges and that are raised in other regions where wool is the prime consideration. We can thus pass over the various breeds of fine and coarse woolled sheep, including Merinos, Lincolns, Leicesters and Cotswolds, and this reduces the breeds we are now to treat of to the Shropshires, Hampshires, Southdowns and Dorsets of the strictly "Down" breeds. The Suffolks, Oxfords and Cheviots, though they have obtained much popularity in many states, are not, on account of a certain coarseness of meat or of wool, or of both, to be recommended to the use of those who desire to produce the highest class of mutton together with a fair amount and quality of wool, though sometimes the rams of these breeds prove of great service in obtaining some desirable improvement in the flock. Having then thus cut out some very worthy breeds of sheep from consideration, we are at liberty to devote a little space to a review of the medium-wooled "Down" breeds—so-called because of their origin in the general region of the downs or low rolling hills of the south of England. Of these breeds the best for our purpose is probably the Shropshire.

These sheep have taken the firmest hold of any of the mutton breeds in this country and Canada. The high quality of their meat, the amount of high-grade wool they will produce—the ram's fleece constantly running to twelve pounds and the ewe's to eight—their hardiness and ability

ened in the ewe flock, I, personally, have always had the best of luck with the "Shrops," and so may be biased in their favor; but experience always has more weight with me than theory. The white-faced Hereford steer and the black-faced Shropshire sheep, as generally seen together in the rich pastures of their adjoining native counties in England, have for me a most unfailling attraction, even if I am reduced to the necessity of enjoying the sight in the somewhat different atmosphere of the Kansas City or Chicago stock-yards.

Southdowns and Hampshires

Southdowns are well represented on this side of the water, though not nearly so numerous as are the Shrops. The Southdown is the smallest of the Down breeds, the rams seldom going over two hundred pounds or the ewes over one hundred and fifty. In color the face and legs are more of a brown than a black. They are credited here with being the hardiest and least subject to disease of any of the Down breeds, but with what truth I cannot say from experience. They are good grazers, good breeders and mothers, but not disposed to breed quite as early as the Shrops. Their meat and wool are both of good quality; but the rams rarely fleece over eight or the ewes over six pounds. In districts where they abound the farmer who has a special liking for them will do well to admit his ewes to one or, still better, to two crosses of Dorset or Oxford for the sake of the early breeding tendency, and in the case of the Oxford also for the increase of size and weight.

Hampshires are, I think, hardly as widely distributed as the Shrops or Southdowns in this country, though they are very popular in the English colonies. They run to great weights and their meat is held in high esteem, but the fact of



Shropshires, Wisconsin Agricultural College—In Center, First-Prize Yearling Wether of Breed, 1909 International

their wool being often somewhat coarse and small in amount rather works against their popularity. They are prolific, but not early breeders, good milkers and good mothers. The lambs grow very rapidly, but their meat hardly equals in quality that of the other Down lambs. To obtain the best results in early lambs from a flock of Hampshires, one or two crosses with a Dorset ram are desirable. An Oxford is too liable to increase the tendency to coarseness. They will, through all crosses, retain the dark face and legs.

The Suffolks are nearly as large as the Hampshires, are hardy and good breeders. Much that has been said about the other Down breeds is applicable to these sheep, but since they have not spread to any great extent in this country we need not further consider them here.

Other Mutton Breeds

The Dorsets—horned, with white faces—are mostly valued for their tendency to early breeding, and for that reason the use of the rams on other breeds has become very general. The Dorset ram will impart this characteristic very surely on almost any breed, even on scrubs; but it must be remembered that this quality does not become fully developed in the ewes of any other breed until the cross is repeated in the second generation. To obtain this advantage it is not necessary, therefore, to start up a flock of Dorset ewes; it is not even desirable, because it implies the loss of the black points; and the cross-bred ewes are generally the hardiest. The Oxford Downs also have this peculiar faculty, though not so fully developed, and their coarseness makes them less desirable as sires.

Other breeds of English sheep are occasionally used for this class of breeding, but none of them have obtained much of a foothold in this country.

In closing this notice it may be useful to mention the most important points to be sought for in the mutton sheep, as set forth by the United States Agricultural

Department in one of its publications: Form—Compact, thick set, short-legged with deep body of medium length. The top-line of the back should be straight; the under line low at the flanks.

Condition—There should be a deep, even covering of firm, mellow and springy flesh, without lumps or rolls of fat, especially on the back, loin, rump or fore flanks. The neck should be thick; top and points of shoulders, backbone and loin well covered; leg of mutton deep and full.



An Oxford Wether

In choosing breeders for the flock and in noting points to be corrected, attention to these points will be found of great service. JNO. PICKERING ROSS.

This is the second article of Mr. Ross' series on sheep. The third will appear in an early issue. EDITOR.

Curing a Bruised Udder

A NEW YORK subscriber writes: "I have a cow which gives bloody milk from one of her teats. The milk appears all right for three or four milkings and then it will be bloody, sometimes only for a few strips and sometimes all through the milking. There does not seem to be any fever in the udder, but there is a slight lump or kernel at root of the teat. I have no reason to think she has tuberculosis."

From the description given it is very apparent that the trouble is due to a rupture of one of the small blood vessels of the udder, no doubt caused by a bruise. It is probably a result of the cow lying upon one of her udders or in contact with some other hard substance.

It will probably be a difficult process to bring the cow back to normal condition. Thorough massaging with hot water and keeping the affected quarter milked out often thoroughly will be necessary. This should be followed twice daily with a thorough application of arnica and camphor rubbed well in. It might be well to give the cow a dose of Epsom salts followed by one half ounce of saltpeter every other day for ten days. In all probability these directions will overcome the trouble if diligently followed.

HUGH G. VAN PELT.

Some Things That Cause Lameness

A MONTANA subscriber writes: "My cow got lame in her right hind leg, and is now getting the same in her left hind leg. She can't lift them far from the ground and has difficulty walking, lies down often, but seems otherwise in fair order."

There are so many causes for lameness that it is almost out of the question to diagnose a case like this without seeing the animal. If she is valuable, it is always advisable to have a veterinarian examine her, in cases like this where the seat of the trouble is not obvious.

If the lameness is in the leg as this letter indicates, the cow is probably troubled with rheumatism and should be confined to a warm, sunny, well-bedded, dry box stall. At this time of the year she will rapidly become better. She should be fed a light ration of cooling food, such as bran, oats and green feed.

It is often the case at this time of year, however, that the soreness is in the feet rather than in the legs. Perhaps you will find, upon examination, the soreness just under the horn of the hoof, in which case the horn should be pared away carefully, the pus thoroughly cleaned out and the sores treated with calomel and packed with oakum. This should be treated every other day until the cow has ceased to be lame. H. G. V. P.



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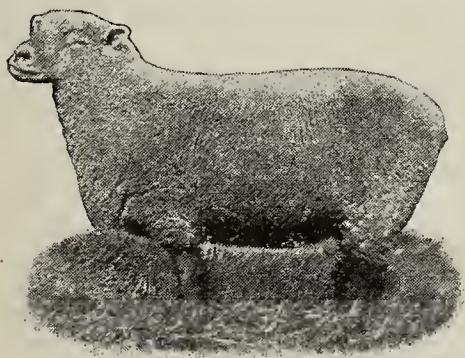
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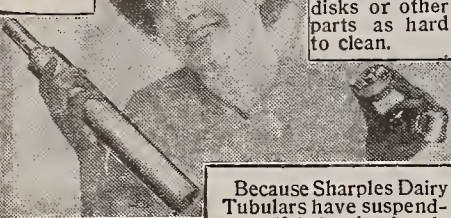
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Live Stock and Dairy

Here are two articles on meeting the mid-summer pasture problem. Mr. Kelly, writing from New York state, favors soiling or, if possible, feeding ensilage. Mr. Coverdell, in Missouri, recommends catch crops or the reserving of part of the pasture. We present both views; our readers, working under varying conditions, can tell which system fits best into their special needs. EDITOR.

Supplementing Sun-Burnt Pastures

THE time when dairy cattle can profitably be turned out to shift for themselves during the summer has passed. Under the best conditions the abundance of pasture-grass is certain to decrease after the middle of July and its quality also deteriorates. To sustain an even flow of milk we must be prepared to supply additional food. A milk-flow allowed to decrease at this time cannot be fully regained until the cow again freshens.

The cow that is giving milk, and to almost as great an extent the growing heifer, suffers a severe shock from which she is slow to recover if compelled to fight flies and exist on semi-starvation rations in a sun-burnt pasture. Many dairymen make the mistake of allowing the cows to shrink in their flow of milk before beginning to feed supplemental foods. Supplying these as soon as the pastures begin to fail makes the change more gradual and insures that even, steady thrift of the cows which is so essential to sustaining a large flow of milk. Another very common mistake made by many dairymen is that of feeding a heavy grain ration to the cows when a bare pasture constitutes the sole supply of roughage. Such roughage is neither palatable nor abundant enough.

On the modern dairy farm where corn, clover and alfalfa thrive it is unnecessary to plan an extensive and complicated system of forage crops to supplement the pastures. The supply may be obtained by holding over corn-ensilage or by cutting clover and alfalfa and feeding them green in liberal quantities. Oats, peas, rye, barley and various other crops may be specially grown for supplemental summer feeds, but none of these crops will yield as much feed as corn, clover, alfalfa and oats that are raised in the regular crop rotation, and the only real advantage of growing the former feeds lies in the fact that they sometimes may be raised on land that is not used for growing the crops in the regular rotation. I believe it generally unwise to practise a complicated system of growing catch crops, when it is possible to obtain equally good results from the green feed supplied by the regular field crops.

In actual practice I have depended chiefly upon corn, clover and oats for soiling purposes during the summer, harvesting as much of each crop green as was needed to balance up the deficiency of the pasture-grass. Corn-ensilage has the advantage of being at hand in case the drought comes unusually early in the season, when it is difficult to get soiling crops to growing heavily enough. Corn is both the best grain and fodder crop and the best green forage crop. This fact has been a stumbling-block to many dairymen. In trying to save grain and ensilage for winter feeding they have allowed many dollars to slip through their hands by underfeeding in the summer. The same holds good when clover or alfalfa are saved for hay at a time when the cattle are suffering for succulent food. In no other way can we realize greater feeding value from these crops than by cutting and feeding them green. It is the height of folly to save clover and alfalfa for hay and allow it to lose feeding value from rain and heat before feeding it to our cows if they are suffering in a drought-stricken pasture for want of this kind of food.

It is common to see a herd of dairy cattle in late summer stamping dust from the dried-up pasture, fighting flies and vainly endeavoring to break through a fence which holds them out of a luxuriant field of corn that flaunts its prodigious wealth of dark green forage before them. It is a penny-wise and pound-foolish practice to allow dairy cows to fall away in their yield of milk and condition when a few loads of the rankly-growing corn spread in the pasture would keep them in good condition. It is true that when corn is cut green it has less feeding value than when it is mature, but the ripened stalk and leaves are largely wasted, as much of the crop is handled. When cut and fed green there is scarcely any waste, for the whole stalk, leaves and grain, is

eaten. While corn in its roasting-ear stage has less total nourishment than the mature plant, corn cut and fed at this period actually gives better results than when husked from the standing stalk and fed later when the cattle have once fallen away in their milk yield and flesh condition. More than one half of the run-down condition of dairy cattle during the winter can be traced to a decline in condition before they are taken from the pasture in the fall.

W. MILTON KELLY.

UNLESS we take timely steps to meet the usual midsummer shortage in pasture, we must bear the consequences, and while we may bump along and tide the stock over without any extra effort to keep them in prime shape, there is sure to be a decrease in flesh, and with the dairy herd falling-off in milk flow. Farmers have grown so accustomed to this situation that many regard it as a matter of course, doing very little, or nothing, to reverse conditions and turn what is usually a profitless season into one of profit.

Many of us are inclined to stake too much on the hope of the mown meadowland springing up and supplying pasture. Although the meadowland will furnish an abundance of fine grazing in the fall, the grass seldom reaches a sufficient height to be of benefit at the time it is most needed, so we must seek some other source from which to draw during the season of need. As the most critical shortage lasts but about a month or six weeks, a little foresight ought to enable one to provide for it.

If a small portion of the pasture-lot can be dispensed with, or an entire lot, it may be held in reserve for the shortage season. Its undisturbed and luxuriant growth will furnish the much-desired grazing, besides giving the pastured-down portion of the lot time to form a new growth. Or a small area of the regular meadowland may be reserved unknown to serve as extra pasture later, care being then taken not to over-pasture and injure the growth. In either of the above cases one might turn the herd on the heavy grazing for two or three hours every day, and thus economize to such an extent that a very few acres would totally supply the shortage.

An oat or rye field, while somewhat ahead of the season for this plan, may be utilized as outlined above, but probably it would be more economical to mow a quantity of the crop each day and feed it in the pasture, as the animals are likely to waste a considerable portion of the stems where the field is pastured. Still another, and perhaps the most profitable, plan, for managing either of the above fields to meet the pasture shortage, is that of whisking the oats or rye from the field while they are yet in the "milk," turning the stubble under with a stirring-plow and again sowing the field to some quick-growing crop. Rape, rye and several other plants will quickly spring up, forming excellent pasturage and a most beneficial fertilizer to be turned under later on.

Simply supplying the present need of pasturage is not the only point, nor is it the main point, to bear in mind. The cow that is reduced in flesh and falls off in milk-production at this particular season never will regain normal before the severe winter weather sets in, and then it is next to a miracle if she does her very best in flesh or milk product, no matter what may be the quantity and quality of her rations. It is, therefore, quite evident that we must make some provision for meeting this pasturage shortage, else it will prove not only a present-time loss in cow-flesh and dairy products, but a continual drain from the profits of the dairy herd till next season.

M. A. COVERDELL.

An Army of Dairymen

LAST winter I had the pleasure of visiting my old home near Oriskany Falls, New York. Signs of progress were everywhere, but one of the things that impressed me most was the systematic way the milk of the region was handled. It would be hard to estimate the saving of time and effort that is there made possible by a good organization. Not only is it economical, but the standard of the business has been raised.

This region is now largely a producer of milk for New York City. The country is hilly and remarkably well adapted for grazing. Almost all the farms have clear running water from springs, and most of them support herds of cows varying from ten to twenty or more. The monthly returns for milk pay all the current farm expenses.

Waterville is headquarters for collecting

and shipment of milk. Teams are sent out in various directions in the early morning with empty cans properly cleaned and sterilized, each team taking a route of three or four miles with cans corresponding to the capacity needed for the route, leaving the required number of cans on a stand at each farm-house. They make the trip with the precision of a railroad system. At the end of the route they return, taking up the cans of milk that have been placed on the stands by the farmers, who have taken off the empty cans for the next day's milk. Each farmer knows within ten minutes the time the team passes his platform. The various teams come in to the station almost at the same time from the different directions, bringing in the milk from hundreds of cows for shipment in refrigerator cars, to be delivered in New York City twenty-four hours later.

On the tenth of each month the farmer gets his check for the previous month's delivery.

The company inspector calls occasionally to look after conditions and inspect stock and see that proper care is taken of the milk.

Conditions have greatly improved here in the matter of sanitary dairying. Stables are whitewashed and are cleaned and swept every day, and comparatively decent conditions observed by most farmers and kept up by reason of close inspection. Yet it seemed to me that milk from this great herd of cows and the various methods of this army of farmers might in some conditions be improved upon. Good advice and suggestions have brought great improvement, yet the average farmer does not go far at one move.

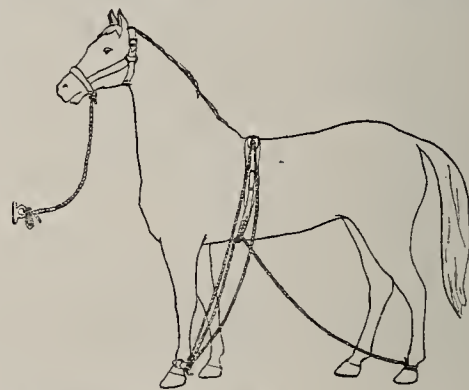
E. L. FERGUSON.

To Discourage a Kicker

A SOUTH DAKOTA subscriber asks how to break a young mare, not otherwise vicious, of kicking in her stall.

The treatment depends whether she kicks with the intention of hurting you or simply has a habit of kicking the planks. If the latter, put a plank or timber across the stall just above her hinder parts, but so close that she can just stand under it without hitting it. This will prevent her throwing up her hind end and will soon discourage her from the kicking habit.

If, on the other hand, she aims her kicks at you, proceed as follows: Put on the saddle part of a good strong harness and buckle it rather tightly. Prepare a couple of short straps with rings attached and buckle around each fore foot just below the fetlock. To each of these straps attach a rope about the size of your forefinger, run it up through the



For Simplicity, Rigging is Shown Only on Near Side—It Should be Applied on Both

terret, back to the foot and through the ring, pass over belly-band and tie to hind foot just below fetlock. With this rigging on, the moment the mare tries to kick, she pulls her fore feet from under her. This usually cures absolutely after a few attempts to kick. It is pretty rough treatment, but just the medicine for a horse that really intends to hurt you. Keep it on all day; then skip one day and repeat. This will probably be enough, but put it on until the mare shows no disposition to repeat the vice.

DAVID BUFFUM.

Feed a variety to all farm stock, whether feathered, furred or haired.

A little air-slaked lime dusted in the stable will sweeten it up and kill foul odors.

It is poor economy to have a two-dollar-a-day hired man losing time by driving a plug team.

The various gases arising from the manure in the stable are destructive to leather. It pays to have a cupboard, or harness-room, in the barn, where the harness may be kept out of the reach of them.

The horses' noon-hour in a sweltering stall gives little more comfort than no rest at all

Live Stock and Dairy

When a Ewe's Udder is Caked

AN OHIO subscriber writes that half a dozen of his breeding ewes have caked udders and do not furnish milk for their lambs. This is a discouraging trouble and not very uncommon, as it may result from a variety of things. First, the breeding ewes may have been exposed to a cold, heavy rain previous to lambing or they may have lain on wet ground, either outside or in the barn, or it may be (and this perhaps is usually the cause) that they were not properly dried up last fall when the lambs were weaned from them. Whenever one finds a hard substance in their teats, as is the case with some of these ewes, it certainly shows that there are milk clogs, which either formed there last fall after the lambs were weaned or else came into this condition after this year's lambs were born.

When the udder is badly caked, it is a serious job to get it back to natural condition. Therefore, to avoid this trouble, to begin with, ewes should be very carefully dried up when lambs are weaned from them; they should be milked partly dry as many times as necessary, in order to keep the udder soft and in proper condition. Some ewes give very little milk at weaning-time, and others still have a large flow. Therefore, all ewes cannot be treated alike, milked out only twice, as was done in this case. The writer knows of some ewes he had to milk out eight to nine times before he got them properly dried up, while others had to be milked only twice.

The next thing is to see that breeding ewes, before lambing, are not exposed to any cold rain or storm, and furthermore, not allowed to lie down in a wet or filthy barn, which causes caking of the udders.

Caking is sometimes also caused by heavy feeding, but, judging from the ration described, I do not think that this was the reason in this case.

Another precaution that should be taken with newly-lambed ewes is to examine them for at least three days after lambing, twice a day, morning and evening, which can easily be done in a small flock, to see if the lamb takes all the milk and if it sucks on both sides. It is often necessary to milk the surplus milk out, as the lambs often are unable for the first few days to take all the milk from the udder. Again, it sometimes occurs that lambs will suck only on one side, and as a result the udder on the other side will cake. This neglected side should be milked out until the lamb grows bigger and is able to suck on both sides.

Sometimes, when ewes are allowed to lie down in manure or mud and get some of it on their udders and teats, lambs absolutely refuse to suck on them until it is washed off and cleaned up.

It has also been found (but in rather rare cases) that lambs have been unable themselves to open up the teat at first on account of a heavy pus which has collected right at the end of the teat and must be opened up.

When caking of the udder is detected at the start, it can be brought back into natural condition by the following treatment: First make applications of warm water, at least three times a day, as warm as the ewe can bear. A piece of woolen cloth should be dipped in the water and then spread over the udder. When a little cool, repeat. This bathing should be continued at least five minutes each time. When bathing is finished, wipe the udder dry. Have some pure hog-lard warmed up and rub the udder with this gently, as hot as the ewe can stand it. Do not leave lard on the teats. Wipe it off with a dry cloth so that the lambs will suck again. If the caking should only be on one side, only that part needs to be treated. Milk out all thick caked milk each time the application is made.

The ewes that have caked udders should not be maintained in the flock for another year for breeding purposes, regardless of how good they may be. A ewe that once has had a sore udder will have it again and perhaps worse the second time than the first time. She should be fattened and sold to the butcher.

FRANK KLEINHEINZ.

Weanling Pigs Pay Well

IT is the practice with a number of farmers in this West Virginia region to sell many of their pigs at weaning-time. Pigs from six to eight weeks old of good breeding have sold readily at two dollars and fifty cents each to people who work at the coal-mines. They want a few pigs to eat the scraps and to make pork in the fall. At this writing good pigs will sell at three to four dollars each to these people.

Last spring I kept an account of the

feed used in growing twelve Chester White pigs until they were eight weeks old. They belonged to two sows. One farrowed six pigs April 8th, but lost two. The other farrowed eight on March 10th and saved them all. The sows had free range during the day, but were confined to their respective lots at night. The sow with the four pigs was young, and the other past five years old. I give below the amount and value of feed consumed by the sows and pigs from a week before the sows farrowed until the pigs were eight weeks old. The feed is valued at about market quotations, which was somewhat less than the price I had to pay at retail for such feed as was purchased—the middlings—the other feed being grown on my farm. The following is the itemized account:

| | |
|---|---------|
| 535 lbs. middlings, \$30.00 per ton.... | \$8.03 |
| 1 1/4 bu. corn, 75c. per bu..... | .93 |
| 102 lbs. mixed feed, \$1.50 per 100 lbs. | 1.53 |
| 50 lbs. corn-meal, \$1.50 per 100 lbs.... | .75 |
| 2 1/2 bu. potatoes, 40c. per bu..... | 1.00 |
| Total..... | \$12.24 |

This makes the feed bill average one dollar and two cents each for the pigs. They were weighed on the day that the older ones were eight weeks old and found to average slightly over thirty pounds each. If I allow six dollars for feed for the two sows during the period of gestation and five dollars and seventy-six cents approximate labor cost, I have the following as the entire cost of twelve pigs at eight weeks old, which weigh in all three hundred and sixty pounds:

| | |
|--|---------|
| Feed for two sows four months.... | \$ 6.00 |
| Feed for two sows with pigs two months | 12.24 |
| Labor | 5.76 |
| Total..... | \$24.00 |

This makes the pigs cost six and two thirds cents per pound. At present high prices for hogs, that shows a fair profit feeding pigs on high-priced feed-stuff, if the feed is carefully selected and as carefully fed. I expect to breed the sows for fall litters and they will live on the pasture with little if any grain until pigs are farrowed next fall. A. J. LEGG.

Putting Flesh on a Mare

AMARYLAND reader wants to know how to fatten up a fifteen-year-old mare in poor flesh now.

Let her run out to grass in a good pasture. Bring her in every morning and evening, and feed her the following: Three quarts of bran, one quart of corn-meal, one quart of molasses. Mix well together. If you have to use her, feed also a fair ration of oats at noon, but she will do best if given no work for a while till she begins to put on flesh.

In general I do not recommend feeding potatoes to horses. As long as there is green grass, no root feed is needed. When such feed is required, carrots are best. DAVID BUFFUM.

"Caught in Swinging Door"

APENNSYLVANIA subscriber asks about a cow which was caught in a swing door, the pressure coming on her side and just under the belly. The swelling which was left along her side and next to her udder is the natural result of the accident. As she eats and milks naturally and seems to have no pain, it is very likely that the swelling will go away of its own accord. To hasten recovery frequent applications of equal parts arnica and camphor will help. H. G. V. P.

Boiled-Down Wisdom

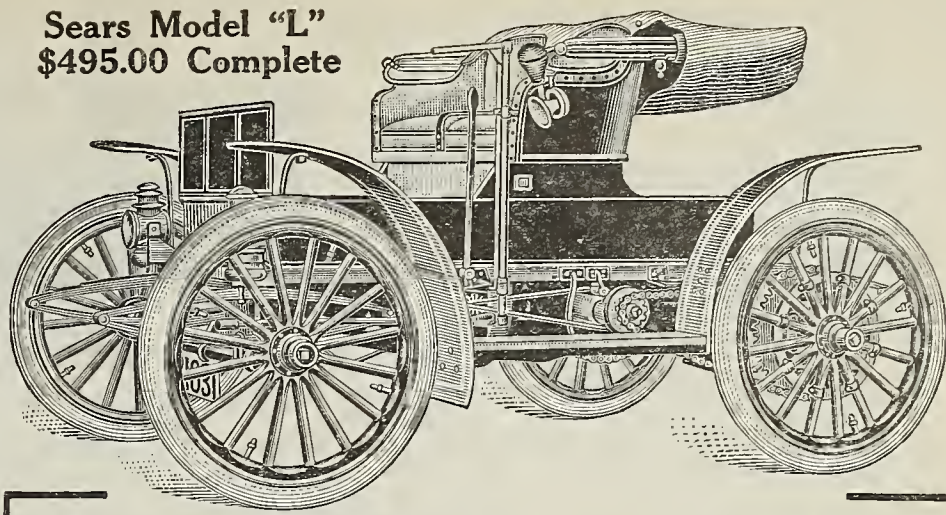
As a lifter of mortgages the sheep is holding the hog down to a pretty close race, with slight odds in favor of the porker.

While the grass is good and the stock in prime condition, shove off to market some of those old, infirm cows of the dairy herd and replace them with young and more profitable stock.

Butter soon taints when formed from overripe cream, while butter made from prime cream will remain fresh and sweet longer than the cream would. Therefore, we churn at least twice a week.

You almost have a conniption fit if one little measly fly walks over some exposed part of your hide; yet a million of them swarm over your dairy cows and still you expect the poor animals to gush forth a profitable milk-flow. Dig out that sprayer and get busy with it!

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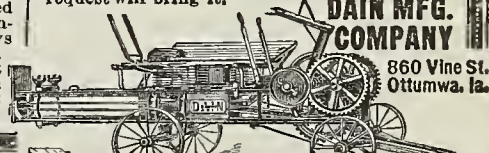
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Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/4 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

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A "Back to the Land" Corporation

HERE'S something new! A million-dollar corporation to buy lands at ten dollars an acre and settle people on forty-acre farms. On each farm to be placed buildings and fences to cost four hundred dollars, stock and teams to cost three hundred, and implements and incidentals to cost one hundred dollars; the whole farm plant to cost one thousand two hundred dollars, for which the settler is to be trusted. Thirty-two of these small farms to be grouped about one quarter-section place, on which will be a creamery, heavy machinery, ensilage and feed cutters, saw-mill and the like, with a director who will be the teacher and counselor of the farmers. The entire outfit to cost fifty thousand dollars. All the operations to be systematized and organized, and all the marketing to be coöperative. Such is the outline of the National Farm Homes Association proposed by the Governor and the Commissioner of Immigration of Missouri, with whom is associated Frederick D. Tucker, formerly connected with the Minnesota College of Agriculture.

The prospectus issued for this interesting project estimates the "possibilities" of a forty-acre farm at \$2,375 a year from crops as follows: Three acres of tomatoes, \$150; one and one half acres of onions, \$150; two acres of potatoes, \$100; four acres of fruit, \$400; one acre of small fruits and berries, \$150; four acres of corn and cow-peas, \$160; eight acres of alfalfa, \$240; four acres of ensilage and late rye, \$200; four acres of timber, \$25; three and one half acres of miscellaneous garden, \$200; four acres of clover, \$100; cows, pigs, chickens, ducks, etc., \$500. It is calculated that \$1,375 will support the family over and above what they consume of farm products, and that the farmer will be able thus easily to meet his annual payment of one hundred and sixty dollars. The funds as paid in will be taken for the establishment of new blocks of farms, and thus will be a revolving fund which will continue to aid farmers and would-be farmers in the establishment of homes in Missouri and other states where cheap lands may be obtained.

Perhaps readers of FARM AND FIRESIDE may have some comments to make on the project. That it is well meant and honestly proposed there can be no doubt. The appeal now is to capitalists for the purpose of securing the fund of one million dollars with which to establish the first twenty settlements. This capital is to receive three per cent. interest. Our readers' opinions as to the practicability of the plan from a standpoint of practical farming would be interesting.

* * *

Don't sell off too close and do without yourself.

Just think how almost every farmer handles his hay so many times, brushing the seeds and tender blades off. While you are storing it, put it where it will not be molested till winter feeding.

Mow the oats while they are in the milk; whisk them into the stack; immediately stir the field and sow to rye for fall pasturage. You thus will have not only one of the finest of rations for winter roughage, but can turn the stock in on a luxuriant and highly nutritious pasturage at a season when most of the pasture-lots are short and dry, and the grass tasteless.

All About Concrete Fence-Posts

IN PRAIRIE regions the concrete fence-post would seem a promising competitor for the favor of the farmer. It will not rot, and if reinforced with steel it will not break off. It is not as handy for the man with the hammer and nails as the wooden post, but it has its points of superiority. The United States Department of Agriculture has issued Farmers' Bulletin No. 403, which tells all about the merits and demerits of the concrete post, how to make it, and what it is most useful for. Ask your congressman to send it to you if you are interested. This bulletin says: "It (concrete) has been thoroughly tried and tested, not only in laboratories, but also by years of actual use by the United States Government, by state agricultural colleges, by railroads and stock-yards, and by hundreds of farmers, and it has, among other things, proved successful in the construction of fence-posts."

To be sorry for yourself in misery is doubling it up.

Give all the hands and horses an hour's rest at noon. They can work better afterward.

See that the horses are watered often on these hot days. You know how it is yourself.

Treat your hired help as gentleman to gentleman. If he doesn't deserve to be treated as a gentleman, he doesn't deserve to work for one.

During the hay-harvest season many a farmer wastes six-dollar hay simply because he has plenty of it; you generally see this same farmer buying ten-dollar hay the following spring.

Conservation and Ballinger

MR. NEWELL, Chief of the Reclamation Service, and Mr. Davis, its chief engineer, have given to us our irrigation system. This system gives to farmers irrigated lands at an average of about forty dollars per acre, and when the plant is paid for the power at the dams is the property of the farmers and can be used for all electrical purposes. The irrigation and power companies, when they do the work of reclamation, charge the farmers from two hundred to four hundred dollars an acre for the lands, and keep the power for future profits. Mr. Ballinger, before he became Mr. Taft's Secretary of the Interior, was attorney for the Hanford Irrigation Company of Seattle. Such companies are opposed to the government's doing the reclamation. They prefer to do it themselves and make the difference between what the government gives the farmer and what the corporations give him. Quite simple and natural.

Mr. Ballinger declared in one of his letters which have been made public that he is opposed to government reclamation of any lands which offer profitable investment for private enterprise. He is preparing to get rid of Newell and Davis, who have testified against him. It is stated that President Taft contemplates action which will place the reclamation service in the hands of army officers—who do just what they are told and no more, caring, if one may judge of their river and harbor engineering, very little for the broader public interests.

On this statement it would seem proven that Mr. Ballinger intends to take or at least believes in taking action to the end that the difference between forty dollars an acre and from two hundred dollars to four hundred dollars in reclaimed lands, and the returns from power generated at irrigation dams, shall in the future find their way into the pockets of the irrigation corporations, rather than into the pockets of the farmers. And worse than this, there seems to be good reason to fear, from Mr. Taft's own declarations, that he will be supported in this by the President, as he has been in everything else so far in his most extraordinary cabinet career.

These things are stated that the record may be kept straight. We indulge in the prediction that if these things are done something will drop, and that other and larger figures than Ballinger's will be found under that something when the muss is cleaned up.

* * *

A lazy farmer declared that he didn't like alfalfa because it had to be mowed so many times each season.

All corn-hoeing and no fishing ruins the boy's taste for farming, but raising his own colt helps to keep him at home.

The fellow who talks so much about the good old days that have gone by very likely cursed them when they were going by.

Baled hay is easier to handle in marketing or feeding, occasions less loss in handling than the bulky product and will occupy but a small space in the barn or any outbuilding, where it will be safe from rains and where the stock cannot get at it. If you have a very great amount of this surplus product, it will pay you to purchase a baler of your own.

Do You Know of a Lost Girl?

THE name of the Illinois Vigilance Association reminds one of those rough-and-ready organizations which mete out punishment without courts in pioneer times and places. The name of the Chicago Law and Order League suggests liquor prosecutions. But both these organizations are after bigger game than horse-thieves or bartenders. They are engaged in the work of saving girls from the wiles and snares by which they are entrapped into lives of vice. Jesus said to the woman taken in her shame, "Go, and sin no more." These two humanitarian bodies seek to help her to do so and to keep her from being sold into shame. They are, therefore, in the highest sense, Christian bodies. The men and women who are officers of them are of high character and many of them nationally known. They may, therefore, be trusted. Here is what one of the directors of the Illinois Vigilance Association says in a letter to FARM AND FIRESIDE:

We should be glad if you would state to the public that the Illinois Vigilance Association or the Chicago Law and Order League will undertake to the best of their ability to investigate the location or the claims of any parties in Chicago who may be offering work or any other inducement to any young woman whom they desire to have come to Chicago. We desire to hear from fathers, mothers or young women before they arrive, or from the relatives of young women who have reached Chicago and have not sent entirely encouraging reports home. Sometimes such young women can be rescued before serious disaster overtakes them. Sometimes no crime is attempted until the young woman is out of money and discouraged.

Both these bodies can be addressed at their offices in the Association Building, Chicago, Illinois. Similar bodies may doubtless be reached in most cities by addressing Y. M. C. A. secretaries and asking for their addresses.

And this must bring to the mind of all of us the fearful conditions which must prevail in our great cities, when organizations such as these are necessary. The best vigilance association is a home in which the girl is made happy.

The Attractive Ads.

With magazine before the fire

I sit and nod,
And dream of how I may acquire
A goodly wad.

The "ads." get muddled in my mind,

As well they may.
And, as I dream, the same I find
In queer array.

I dream of planting Plymouth Rocks

Three feet apart;
I dream of growing mighty flocks
From such a start.

I dream of hatching early peas

Beneath a hen,
And raising many broods of these
Within a pen.

The "ads." get mixed, it comes to pass.

I sit and nod,
And in my dreams I soon amass
A goodly wad.

—Kansas City Journal.

OUT OF THE LETTER-BOX

EDITOR FARM AND FIRESIDE:—

I want to say to every one of your readers that owns a cow: Cut out and paste up on your milk-house door the article entitled "Her Ladyship, the Cow," by W. F. McSparran (from the May 10th issue). Read it and reread it and reread it again until you have committed it to memory.

And I want to say to you, Mr. Editor, reprint that article once a year as long as you publish FARM AND FIRESIDE.

Arkansas.

J. R. PAXTON, SR.



Some Interesting Letter-Writing on Oleomargarine

By Judson C. Welliver

THERE will be no legislation during the present Congress for the purpose of removing or materially reducing the internal revenue tax on oleomargarine. At least, such is the probability at this writing, with the session very near its close. That, however, is no assurance that the fight of the oleomargarine manufacturers is over. On the other hand, I happen to know that the Swift and Armour interests, which have been maintaining a particularly active lobby in Washington in the last two or three sessions, are, on the whole, very well pleased with what they have accomplished and have no thought of dropping the fight. These big and powerful interests work on such matters as this on the theory that constant dropping will wear the stone. The truth is that they have made real progress since they began this fight. They have a strong line of Southern support organized behind their movement, and scattering strength in many other parts of the country, particularly including, of course, the big centers of the packing industry.

Now let me give a very specific illustration. A few days ago I received from the editor of *FARM AND FIRESIDE* a letter, inclosing a circular urging support of H. R. 24,651, which is the bill introduced by the Honorable Asbury Francis Lever of South Carolina to repeal the internal revenue tax on oleomargarine and give the Bureau of Meat Inspection jurisdiction of the whole subject. This circular interested me, because it was in the form of a personal letter, written on the official stationery of the House of Representatives and signed with the logotype signature of "A. F. Lever, Member of Congress." I have no doubt that the editor of *FARM AND FIRESIDE* really believed that he had been honored with a personal letter from Mr. Lever. Likewise I have no doubt that he esteemed it a distinction of real class, and for the time, at least, achieved a new and uplifting conception of the dignity of his occupation. I doubt not that as he contemplated himself as a mold of public opinion, receiving from a great statesman said statesman's eloquent appeal for support of legislation which said statesman earnestly assured him was in the public interest, he realized anew that the pen is mightier than the sword; and if he had known everything that was back of that letter of Mr. Lever's, he might even have been led to wonder whether the pen didn't have a few things on the pork-barrel.

Oleo Should Not Masquerade

Now let me tell you the story of this letter of Mr. Lever's to the editor of *FARM AND FIRESIDE*. At the outset I feel constrained to make my acknowledgments to the editor, who in forwarding Mr. Lever's letter to me indicated very clearly that he hadn't fallen for the delicate and insinuating flattering of Mr. Lever's appeal for his support. In fact, he told me that *FARM AND FIRESIDE* wasn't for the Lever bill and wasn't for any other legislation designed to make fraud easier or to enable the public to enjoy the advantages incident to the peculiar privilege of lubricating its bread with painted tallow, sold as first-class butter, but at a slightly shaded price. The editor said, in fact, that he wasn't for any proposal to repeal the tax on colored oleomargarine.

Perhaps he will not object if I quote a few lines from his letter to me. If he doesn't want his letter reproduced here, he can cut this out with his blue pencil; so my gentle readers will understand, in case this part of my letter doesn't get into the paper, that the editor cut it out. Anyhow, the editor said that "*FARM AND FIRESIDE* is opposed to the repeal of the tax on colored oleomargarine. It doesn't believe that it should be sold as butter and its objection to having it sold in colored form is that while the coloring of it may be necessary to make it merchantable, just as the coloring of butter is, the real object of coloring it is to commit fraud and to sell it as butter." Wherefore, the editor, whom I have long known as a peculiarly narrow-minded person with prejudices against counterfeiting, forgery, larceny, obtaining money under false pretenses and various other forms of latter-day enterprise, concluded that *FARM AND FIRESIDE* was not in favor of any plan which would make it possible to fool the public into eating oleomargarine in the belief that it was butter.

Personally, I have been much attracted to the ingenious theory that if you give a man axle-grease to

eat on his bread, and if it doesn't kill him and he doesn't even realize that it isn't butter, the man has no kick coming; the man who sells the stuff for thirty-two cents a pound when it only costs him about twelve cents is doing right well, thank you, and the public—well, you know what the elder Vanderbilt said about the public. That's the real trouble with the public nowadays. It keeps getting less and less willing to concede that its only relation to these things is to be damned.

Mr. Vanderbilt, Mr. Barnum and Mr. Lever

There is a very respectable array of authority in support of the notion that the public loves to be humbugged. In fact, Commodore Vanderbilt and P. T. Barnum obviously had pretty much the same idea in mind when they indulged their respective aphorisms. Their theories about how to treat the public are strictly complementary, the one of the other. The great Barnum maintained that to bunco the public was a divine right; Commodore Vanderbilt, representing a more advanced development of the philosophy of graft, maintained that, the public being buncoed, it had no business kicking, and if it did kick, was entitled to be damned.

But, anyhow, to get back to this letter which the Honorable Asbury Francis Lever wrote to the editor of *FARM AND FIRESIDE*. The first thing that struck me as curious about the letter was that the lettering at the top of the sheet, "House of Representatives U. S., Washington, D. C.," was in purple ink. It was in the particular shade of purple which is oftentimes used by people who have correspondence involving shady transactions, because smart people with very confidential correspondence on their hands long ago learned that this particular shade of purple will not photograph. Not only were the words at the top of the letter head, "House of Representatives U. S., Washington, D. C.," in this particular tint of purple, but the body of the letter was type-written, and Mr. Lever's logotype signature was impressed, at the bottom, in the same identical shade.

Having thus described somewhat minutely some appealing physical characteristics of this interesting letter of Mr. Lever's, I will now insert the text of the letter. It follows:

House of Representatives U. S.,
Washington, D. C.

May 26, 1910.

Dear Sir:—

I have introduced a bill (H. R. 24651), a copy of which I herewith inclose. That you may more fully understand the purport and importance of this measure, I also inclose a copy of statements made before the Committee on Agriculture, House of Representatives, which has it under consideration. There is no class of people more interested in this matter than organized labor. The average laboring man has not the time for the investigation of all the subjects which are of interest to him, but must look to his official organ for guidance in such matters. Therefore, I ask you to give this bill your earnest consideration, and if it meets with your approval, may I urge you to keep this subject before your readers for the next several weeks. A series of editorials upon this subject, urging your readers to write to the President of the United States, the United States Senators from their respective states and Members of Congress from their districts, to the Chairman of the Agricultural Committee, House of Representatives, and to me, asking them to support the bill I have introduced, or something similar to it, would be of great value to those of us who are trying to procure legislation along these lines. Resolutions by your next national convention would greatly aid us. With the hearty cooperation of the labor press, I feel certain that this much needed legislation on this subject will be enacted. Trusting that this matter will be given your immediate and favorable consideration, and that you will forward me a copy of your first editorial, I am

Very truly yours,

A. F. Lever,
Member of Congress.

Reading the foregoing appeal of Mr. Lever's, you will see that the letter which got forwarded to the editor of *FARM AND FIRESIDE* was something of a misfit; it was intended for editors of labor papers instead of agricultural papers. You will also be edified, perchance, to observe Mr. Lever's suggestion that "there is no

class of people more interested in this matter than organized labor." Doubtless Mr. Lever is right, though I have had some difficulty figuring out why organized labor is more interested than anybody else in securing to itself the bright, peculiar privilege of buttering its bread with oleo, tinted with aniline dyes. However, I assume that organized labor will readily understand the big advantages it is going to derive from this new privilege, and will enlist itself on the side of Mr. Lever. Any organized laborer who hasn't sense enough to understand that, barring a certain ancient and excuseless prejudice, tallow candles really taste better than Elgin butter, ought to be instantly disorganized. Just think, if tallow candles were colored a nice, modest, light yellow, they would be so much nicer than butter that the babies would soon cry for them instead of barber-pole sticks of striped candy. In fact, I worry some lest Mr. Lever's project in philanthropy, in which "there is no class of people more interested . . . than organized labor," might come, if consummated, to make tallow candles such a popular article of diet that folks might thoughtlessly go to eating them without taking the trouble to blow them out, and thus burn their poor little insides.

Beef and Statesmanship

But, seriously now, I am trying to get to the point of this letter. And the point is this—and there is nothing facetious about this, either—that during a good part of the late session of Congress the lobby of the Armour interests has maintained a big establishment in the Westory building at the corner of Fourteenth and F Streets, N. W., Washington, and that this establishment, maintained and paid for and universally known among interested people to be the headquarters used by the Armour lobby, prepared, type-wrote, copied and turned over to the Honorable Asbury Francis Lever of South Carolina hundreds of pounds, thousands upon thousands of copies, of letters, circulars, pamphlets, printed extracts from the hearings on the oleomargarine bills before the House Committee on Agriculture and other literary productions of similar character, intent and purport. These documents, prepared at the headquarters of the Armour lobby, were delivered over to Mr. Lever, and by him, putatively at least, mailed out to the leaders of organized labor throughout the country, to all other classes and kinds of suspected suckers and to my distinguished chief, the editor of *FARM AND FIRESIDE*.

Let me make myself perfectly plain on this point. I am trying to say, so that there will be no misunderstanding about what I mean, that the Armour lobby in Washington prepared, printed and paid for a vast amount of literature which was sent out to all parts of the country and to all kinds of people, as if it had originated with and represented nothing whatever save the personal initiation and interest of the Honorable Asbury Francis Lever.

I don't know that it is necessary to say much more about the moral support, and the financial support, of the movement to make fraud easier in the matter of oleomargarine. The packers have simply set up a public-opinion foundry in Washington and, of course, they are willing to help along an enterprising congressman who feels as they do, and as Mr. Lever apparently does, about the desirability of imitation butter as against the real thing. Personally, being an old-fashioned sort of person, I may confess to a feeling that the sort of procedure I have described is scandalous. But it is the sort of thing that goes on a good deal nowadays, in this era of copartnership between big business and big legislation.

The oleomargarine people have made much of their philanthropic interest in the working-man with bread to spread. The above-mentioned methods are hardly those of disinterested philanthropy.

I have narrated this story in some detail because I thought it might be worth while that the readers of *FARM AND FIRESIDE*, who, I assume, are interested in maintaining the integrity of the great dairying interests of this country, should know just what sort of brace game they are up against. At another time I intend to take up in these letters and discuss the various bills that have been introduced for the purpose of making it easier to substitute oleomargarine for butter.

Jeff Carter—Slave

By Mary Minor Lewis



HE slave, leading a mule by a halter, trudged doggedly down a dusty road under the glare of a pitiless August sun in the year of our Lord seventeen hundred and seventy-nine.

His great body was like that of a Hercules done in ebony. The ragged straw hat shaded eyes sullen, somber, brooding. The blue homespun shirt, open at the

neck, showed the muscles standing out like whip-cords as he moved—superb in his physical strength, but the human in him so crushed by generations of slavery, his mind so dulled and warped by ages of ignorance and oppression, that he counted for but little more in the scale of civilization than the beast that followed in his steps.

Presently the road dipped where the creek crossed it, and he stopped and watered his mule. While the animal grazed on the bank, he opened his tin dinner-bucket and, spreading its contents on the grass before him, devoured the food hungrily, greedily, in great gulps as an animal might.

Then he stretched himself at full length on the ground.

Bees droned. A soft wind hissed through the dry sedge-grass. The creek rippled on over its pebbles, slipping by him, down through the meadow past the "Great House," "Gunston Hall," in its grove of ancient live-oaks, trembling aspens and giant sycamores crowning the hill.

What mattered it to him, Jeff Carter, the slave, that the country was in the throes of a terrible war? What did the coming and going of red-coated soldiers mean to him—the rising of Republics, the crowning or uncrowning of Kings—to him, a slave?

Around him stretched the boundless cotton-fields quivering in the midday Carolina sun, where, whatever happened, he labored without reward from dawn till dark. His only conscious emotions now and always were hunger and weariness and, stronger than either of these, hatred of Leech, the overseer.

Being a slave, he took but little thought either of to-day or to-morrow, and so, throwing an arm across his eyes, he turned on his side and slept.

And even as he slept "Gunston Hall," the ancestral home of his masters, was a scene of tumult and confusion; for a few days before the notable old mansion had been seized by a body of British and Hessian troops, and the historic home of the Leighs converted into quarters for the officers, and the family was forced to accommodate themselves as best they could in an upper story, practically prisoners.

Rough soldiers with jangling spurs strode through the stately rooms, and the sounds of oaths, drinking and carousing despoiled a once peaceful home.

In its spacious rooms Mason Leigh and his lovely young wife had entertained many of the rich and great of those times; here their five children had been born and there in the wonderful garden of flowers and orange-trees, with its terraces sloping down to the river, Mason Leigh now lay buried among his forefathers.

The young widow gathered her little brood about her and bore with great patience and dignity the many hardships and privations of her difficult situation. The children were rebellious and chafed constantly under the restraint which the presence of the troops imposed, and Peggie, the little six-year-old, was often openly defiant, and would steal away from her nurses and explore for herself the cotton-fields or the deep still woods, once a part of the forest primeval.

And thus it happened that one day she came upon the slave asleep by the spring.

She stood looking at him in silence, the sun burnishing her golden curls. "Poor Jeff," she murmured sorrowfully, "poor Jeff is so tired! I will wade here and wake him if I see Mr. Leech coming. I hate the overseer, too, I do! He is so mean."

She sat on the grassy bank and removed her shoes and stockings. Then, holding her fluffy skirts high, she waded out into the stream under the overhanging willow-boughs. So absorbed was she in this delightful pastime that she did not hear steps approaching. Looking up suddenly, she saw Mr. Leech, but he saw only the sleeping negro.

Standing over him he lashed the slave with a whip which he carried, crying out angrily, "Get up, you lazy nigger!"

And as the man struggled to his feet dazed and bewildered, he struck him again and again, cursing horribly.

The child stood for a moment like one petrified, and with her small face livid with passion she rushed up the bank crying in her sweet voice, broken with tears, "Stop it! Stop it! Mr. Leech, you sha'n't treat Jeff so!" And she seized the overseer's hand as he raised it to strike again.

Surprised and chagrined that there had been a witness to his cowardly deed, the overseer pushed her roughly away.

She staggered, lost her balance and rolled down the grassy bank.

At the sight of this the savage woke in the slave—man and the jungle blood of his ancestors raced through his veins!

Like a wild beast he rushed upon the overseer, felling him to the ground with a single blow; then, leaping

upon him, he satiated his accumulated hatred and rage, choking and beating the man into unconsciousness. Then, lifting him high above his head, he ran with him to the bank and flung him, more dead than alive, into the creek!

He stood for a moment gasping, his face distorted, muscles quivering, then his eyes wandered to the side of the bank where the little girl sat trembling, her face hidden in her pinafore. "Come 'long wid Jeff, Miss Peggie," he said with wonderful gentleness. "I think I done finish dat lump of po' white trash, but doan you cry! I's gwine take you up to de Gret House to Mistis."

He lifted the sobbing child in his arms and, without glancing toward the huddled mass in the water's edge, trudged off toward the hill.

"Mistis," he said, walking straight up to Mrs. Leigh and putting the child into her lap, "I think I done kill Mr. Leech! An', Mistis, I is glad! Jeff is glad he done it!"

Mrs. Leigh, greatly shocked, listened to the man's story. She sternly reprimanded the slave for his assault upon the overseer and ordered him to his quarters. She then sent other servants to rescue the unfortunate Mr. Leech.

Until this occurrence she had been ignorant of the overseer's methods with the slaves in the cotton-fields and was all unsuspecting of any cruel practices on the part of her manager, and the knowledge, gained now from other reliable servants, filled her with horror, for she was a woman both just and wise in the management of her great estates.

With all her gentleness she maintained strict discipline upon the plantation, and although Leech, so soon as he was recovered from his injuries, was dismissed

and praying; while above the din and cries, officers called frantic orders to demoralized troops!

Mrs. Leigh, with her children clinging about her, quickly realized that their only hope was to leave the house by the back stairs and escape on foot through the darkness to the shelter of the woods.

Instant flight was imperative, for her friends, not knowing that the family were still at the plantation, kept up a merciless bombardment of the house.

So, half leading, half carrying the terror-stricken children, directing and encouraging the cowering servants, the brave little woman led the way down the stairs and through the back door.

The darkness was impenetrable. Just as they reached the cedar hedge by the garden wall, a sheet of flame burst forth from the ships. The very earth seemed to tremble and reverberate with the awful crash of sound! Looking back they saw the roof of "Gunston Hall" in flames.

The British were too busy saving themselves to notice the flight of the fugitive family who struggled on blindly through the night.

Mrs. Leigh carried in her arms little Peyton, her youngest child, and by her side, holding to her skirts, were the others. Stumbling and falling, they pushed on and at last gained the shelter of the woods. Here Mrs. Leigh sank exhausted upon the ground.

A familiar voice roused her. It was that of Jeff, her disgraced slave, escaped from his cabin prison.

"Mistis," he whispered, "whar is Miss Peggie?"

"Oh, my God!" cried the distracted mother, "she has been left behind in the house!"

And as she spoke the words a great light flashed into the slave's dark soul, and, with the knowledge of the child's peril, his bondage was forgotten and he became a man, strong to save!

With a hoarse cry the giant negro darted swiftly through the woods. She heard his great body crashing through the undergrowth and the splash as he plunged into the river, thus making shorter the road to the deserted child. Shot shrieked past him as he ran! The clamor of the assault was incessant, and to this, as he drew nearer, was added the roar of the flames destroying "Gunston Hall."

He rushed wildly through the grounds and into the burning house, now a scene of wild confusion. Hurling from his path with blows from his powerful arm any one who obstructed his way, he leaped like a madman up the burning staircase. Door after door he opened, vainly seeking the child. Almost blinded with smoke and the insufferable heat, he at last, almost despairing, threw open the door of a little room at the end of the hall. There, huddled trembling in a corner in her little white gown, was Peggie!

He wrapped her completely in a blanket and dashed out of the burning house. Onward with his precious burden, through the roar of cannon and the whistle of shot and shell, fled the heroic slave! His face and hands were terribly burned. A sharp stab of pain, and blood soaked the blue homespun of his side where beat as brave a heart as ever led cheering thousands over a victorious field!

In safety, but tottering with exhaustion, he at last reached the heartbroken mother and laid Peggie in her arms.

Then, kneeling at her feet, the slave broke into sobs like a child, crying, "Mistis, Mistis, I done snatch dis chile out of de fire! Don't you never sen' Jeff away nowhar!" And the mistress laid her slender, jeweled hand on the slave's heavy shoulders. "Jeff," she said, with tears streaming down her cheeks, "Greater love hath no man than this, that a man may lay down his life for his friends! You are no longer a slave, but a man—and free!"

With lifted head the free man answered, "Mistis, Jeff takes his freedom, but he is gwine to stay right here at home." And he kept his word as long as he lived.

Many years after the great war was over and America independent, many years after "Gunston Hall" had been restored, Jeff Carter, free, but yet choosing the life of a slave among those who loved him, told the story of that dreadful night to Miss Peggie's children's children as he sat outside his cabin door weaving baskets in the sun.

Heart-Throbs

THE surest way of finding happiness is not to seek it for one's own self, but to endeavor to do something that will bring happiness to some one else. He who goes in quest of happiness for himself alone is seeking the bag of gold at the end of the rainbow. It ever remains just out of his reach. Let him take the first opportunity, however, that offers of bringing happiness to some other life and, lo!—he finds that in so doing he has quickened his own heart-beat and found increased joy in living.

Service has been called the crowning glory of life. The lives that shine upon the roster of fame undimmed by passing years are those which bear eloquent witness of some great and lasting service to mankind. It is not of so great importance how much we do for ourselves and how much we accumulate in worldly estate through the course of a lifetime as it is how much we do for others and how much better we leave the world than we found it. What we do for ourselves will soon be forgotten by the world, but what we do for others will remain in the consciousness of men as a testimony of our real worth.

ORISON EDSON CROAKER.



"Onward with his precious burden . . . fled the heroic slave!"

in disgrace, Mrs. Leigh felt that stern judgment must be passed upon Jeff for his assault upon the overseer.

He was accordingly kept in close confinement in his cabin until arrangements could be made for his banishment to the Leigh's Florida plantation. This was to be his punishment, exile from the only home he had ever known and banishment from the one being in all the world for whom he had ever felt affection—the little child, Peggie.

The next day he was to be sent away, and the heart of the slave was heavy with sorrow and bitterness as he sat with bowed head in his cabin, his soul in darkness, but groping blindly for the light.

"Gunston Hall" was less than thirty miles from Charleston, and when the American officers in the city heard that the place had been captured by the British, they determined to rescue it from the enemy.

Accordingly a force was equipped and sent up the river to the plantation with strict orders not to fire upon the mansion.

Sailing silently up the river at dead of night, the vessels anchored opposite "Gunston Hall."

Whether orders were disobeyed or misunderstood, no one knows, but suddenly, out of the inky darkness, there burst a flame and a roar of shot and shell which rained mercilessly upon the house.

The place was instantly in an uproar and confusion. The officers, sleeping in the house, leaped from their beds and hastily dressed and armed themselves.

The Leigh family, occupying the upper floor, awoke terrified and rushed to the windows, gazing out into the pitchy blackness, relieved only by the flash of musketry.

The slaves ran wildly hither and thither, shrieking

Back to the Farm Again

By Rena C. Lewis

THERE was a time when the farm was not good enough for me. A great longing for the city, its gaieties, its pleasures, its people, blinded me to the beauty of the world about me and made my life dull and cheerless. I was tired of milking cows, of feeding chickens, of helping mother cook for the harvesters, tired even of the very bleating of the sheep and the lowing of the cattle. Every day I dreamed of the time when I should leave these scenes forever.

My desire to leave home was strengthened by association with a girl from the city who spent a summer on a farm adjoining ours. She advised me to take a course in bookkeeping and stenography, and promised to help me secure a position. It was largely due to her influence that on my eighteenth birthday I turned away from the farm, determined to make my own way in the world.

Through her efforts I secured a position as an assistant bookkeeper.

The days that followed are like one long nightmare to me now. At first the new sights and new associations held my interest and I took pride in doing my work well and trying to appear "citified." But in a short time it all became one horrible grind. I went to the office at 8:30 and, save for a brief respite at noon, was at my desk all day in a stuffy little office with only one window and no sunlight. My healthy constitution rebelled against such an unnatural life. When six o'clock came I was so tired that I dreaded the thought of riding home in the crowded ill-ventilated street-car. In the third-rate boarding-house where I lived, because I could not afford a better one, dwelt men and women with whom I could never have any sense of comradeship. For the first time in my life I was bitterly lonely.

I realize that there are other young women, who, had they been in my position, would have risen above this environment. I know that there are country girls earning their living in the city who have adapted themselves to metropolitan ways and are apparently happy.

All this is very well for women who can adapt themselves to the city. I had lived too long in the open to be hedged in by rows of houses and brick-paved streets.

To add to my dissatisfaction with my surroundings came letters from my parents saying how much they missed me, telling of the good times the young people in our neighborhood were having and begging me to return home.

Throughout the long winter I fought back the desire to return home. But when the first days in March came, the

longing for the country was so great that one pleasant Sunday I went to the park to seek some spot where the trees and the bushes shut out all signs of the city. Here, with only the sky and the ground and the sun for company, I learned the lesson that has since made my life happy. I knew I had been chasing a delusion and disobeying the true instincts of my nature. I longed for the freedom of a farmer's life—it was the only life for me.

While thus musing my eye fell on an advertisement in my newspaper for garden-seeds. Swift came the thought that father would soon be plowing the garden, and mother would need me to help her with the early-vegetable beds. My mind was made up, I was going home!

And then came the blessed day when I did return. It was one of the fairest March days I have ever seen. There was the unmistakable breath of spring in the air, and the sun was bright and warm. A few robins seemed to sing a song of welcome as I sprang from the carriage into mother's arms. The hens were cackling merrily, the sheep were bleating on the hillside, the cow-bells were tinkling in the woodland and all about the farm was the hum of life and work that comes with the awakening of spring.

I married a farmer and am certain to end my life in the country. I am thankful for that winter in the city, for it taught me to appreciate the blessings of the farm.

"Joys of Summer in New York"

THE gas-bill is less and the ice-bill is bigger;

The car-fare foots up to a terrible figure; The sun smites your head like a pedagogue's ruler;

You sit in a draft and get cold, but no cooler;

The seaside is sought for the sake of immersion;

You spend your last dollar to join an excursion;

The insects of night grow more lively and numerous;

The fly, in his pranks, is more fiendishly humorous;

Your hat from your brow is more carelessly tilted;

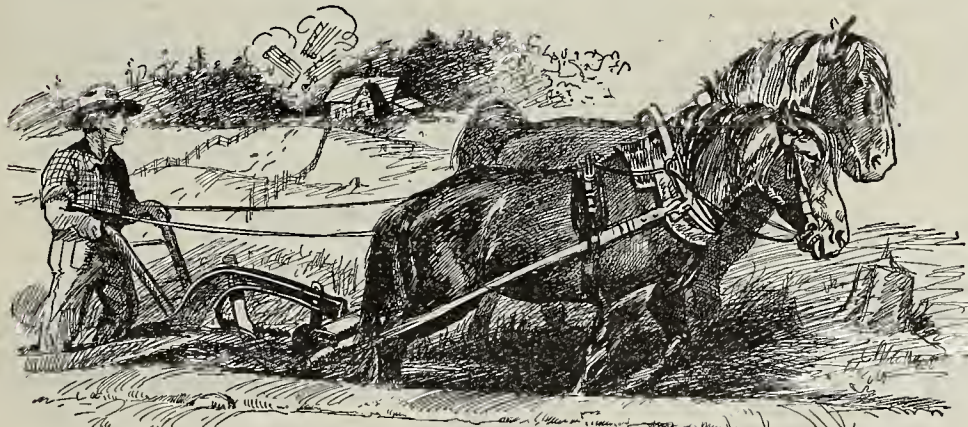
A couple of hours and your shirt-collar's wilted;

You sit in the shade and grow glummer and glummer,

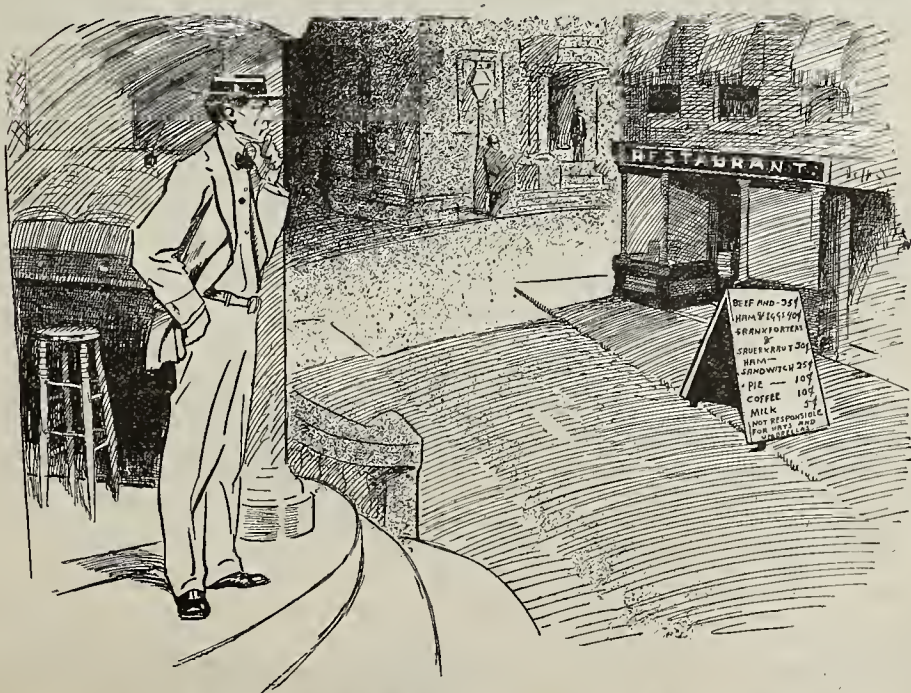
And taste all the joys of a roasting hot summer.

—The Judge.

Which Man Would You Rather Be?



Noon-hour in the country. The hungry farmer welcomes the dinner-bell



The city clerk must rely on a quick lunch in a stuffy restaurant

From Bakery to Farm

Soda crackers are a long time on the road to the country store, and from there to the country home. But

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—no matter how far they journey, never become travel worn. As you open their moisture proof protecting package you always find them not only store fresh, but bakery fresh—clean, crisp and whole.

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Boys: Here is your chance to obtain a handsome and useful watch, and a fine leather fob with a gilt metal charm engraved with your own initial letter without cost. FARM AND FIRESIDE guarantees you satisfaction.

DESCRIPTION: This watch has a handsome nickel case, with open face. It is a stem-wind and a stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only 3/8 inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which any one would be proud.

The Fob is of handsome black leather with a polished buckle, like illustration, with a rich gilt charm engraved with your own initial.

MOVEMENT: Regular 16-size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by FARM AND FIRESIDE.

The manufacturers will make all repairs for a year free, as explained on the guarantee.



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Just send us your name and address on a post-card or letter, to-day, and say that you want the watch. We will send you by return mail, without any cost to you, a book of 8 coupons, each one of which is good for a special eight-month subscription to FARM AND FIRESIDE. We will also send you a sample of FARM AND FIRESIDE. This outfit will help you a great deal in getting subscriptions

quickly. You sell the coupons to your relatives and friends at 25 cents each, send the eight names and \$2.00 to us and we will send you this grand watch by return mail. That is all you have to do, it is easy to sell coupons. Thousands of boys have done it, you can do it in half a day if you try.

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The Housewife's Club

EDITOR'S NOTE—Most every woman has originated some sort of a device or convenience to make part of her housework easier and less burdensome, and to all who have, we would ask that you write and tell us about it. Aside from making a little pin-money for yourself, you will be helping others, and this is what "The Housewife's Club" is for. We will give \$2.00 for the best description and rough sketch of an original home-made household convenience or labor-saving device, and \$1.00 for the next best, or any that can be used. We will also give 25 cents each for good kitchen hints and suggestions, also good tested recipes that can be used. All copy must be in by the tenth of August. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contribution will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

Invalid's Table

THIS simple device will be found very convenient in case of illness, for it has proved invaluable to me. The table is made from a box of the right height, with the two sides removed and brackets fastened on to strengthen it. The lower part slips under the bed, and the top comes in front of the invalid. A tray may be placed on the top and one need have no fear of it sliding off, for the table is very firm. It may also be used for writing and many other purposes.

Mrs. C. E. N., New Hampshire.

A Valuable Hint

THE very name FARM AND FIRESIDE is dear to our household. We have been subscribers since 1888. We think each issue is worth the subscription price. Years ago my sister learned through FARM AND FIRESIDE that borax sprinkled on meat would keep out skippers and after trying it she said that she would not be without the knowledge for fifty dollars. When the meat has taken salt long enough, wash it off and with a baking-powder box, punched with holes in the top, sprinkle powdered borax all over it. Hang it up, smoke as usual and it can hang there until used, if that isn't until ten months. It will be free from skippers unless you cut it and leave the part exposed without borax. There are so many young housekeepers added to our ranks each year that I think the good and tried hints should be repeated.

Mrs. M.

Spanish Tomatoes

MELT one tablespoonful of butter, add two good-sized onions sliced and four or five large tomatoes. Add salt to taste and one or two chili peppers cut in small pieces after removing seeds. Cook till onions are tender. If tomatoes are very juicy, a little cooked rice may be added, or a cupful of chopped cold meat added makes it very appetizing.

Mrs. I. M., Colorado.

How to Wash Lawns

WASHING lawns is important if their beauty is to be preserved. Boil two quarts of white bran in six quarts of water half an hour; strain through a coarse towel and mix in the water in which the lawn is to be washed. Use no soap, if you can help it, and no starch, and rinse lightly in clear water. This preparation will cleanse and stiffen the lawn.

Mrs. J. J. O'C., Washington, D. C.

The Housewife's Letter-Box

Artificial Honey, for L. A. N., Oregon

Five pounds of brown sugar, three cupfuls of water, twenty grains of cream of tartar, five drops of essence of peppermint, and one and one half pounds of honey. Dissolve sugar in water slowly, take off scum, dissolve cream of tartar in a little warm water, add, stirring. Then add the honey heated to boiling-point, then the essence of peppermint. Stir a few minutes and let cool.

Mrs. A. C. E., Nebraska.

To Cook Brussels Sprouts, for Mrs. M. E. C., Ohio

Cut off stringy ends if too long, pick off faded leaves, wash well and put into boiling water and boil for twenty minutes, if fresh out of the garden. If stale or bought at a market, a little longer time may be needed. If Mrs. M. E. C. would like to send me a stamped and self-addressed envelope through FARM AND FIRESIDE, I can tell her how to grow them.

Mrs. R. J. P., New Jersey.

Pork-Cake, for Mrs. J. W. D., Minnesota

One cupful of sugar, one cupful of molasses, one cupful of fat pork chopped, one cupful of raisins chopped, one cupful of boiling water, two eggs, four cupfuls of sifted flour, one teaspoonful of soda in the hot water and one half teaspoonful each of cinnamon, clove and allspice. Pour hot water over the pork, add sugar and molasses, then mix same as any other cake and bake.

Mrs. T. G. M., Massachusetts.

About Peach-Jelly

HERE is a suggestion for readers who have trouble in getting their peach-jelly to jell. To every two cupfuls of peach-juice use two cupfuls of apple-juice and three and one half cupfuls of sugar. You will find that it will make splendid jelly. The syrup left over from canning peaches will do fully as well for this jelly as the pure peach-juice.

N. E. M., Indiana.

Home-Made Ginger-Snaps

ONE cupful of molasses, one cupful of sugar, one egg, one cupful of shortening (either butter or lard), one teaspoonful of soda dissolved in a little hot water, one half teaspoonful each of cloves and cinnamon, one teaspoonful of ginger and flour to stir stiff. Drop a teaspoonful for each snap, in well-floured tins and bake.

Mrs. C. K. T., Kansas.

Automatic Chicken-Feeder

A NUMBER of spice-canisters which had accumulated on the pantry-shelves were put to good use as automatic chicken-feeders, by a few minutes' work with the tin-shears. The cans were approximately four by eight by twelve inches in size. One inch up from the bottom on the front of the can, draw a square nearly equal in width. Cut the sides and bottom of the square and bend inward the flap thus formed, leaving a small gap between the back of the can and the bottom of the flap. With an awl pierce the top of the back of the can, to provide means of hanging up the feeder. The canister is now ready to fill with corn, grit, etc., and is just as good as those sold in local stores for sixty cents.

Mrs. A. M. H., Pennsylvania.

To Keep Eggs

TO THREE gallons of pure water add one pint of air-slaked lime, one half pint of salt. Mix well and put into a keg or stone jar. Let stand a day or so. Into this put the eggs, which must be perfectly fresh. Be very careful not to crack the shells. A thin glass or scum will form on top of this solution, excluding all air, and if it fails to form, add a little more lime and salt. I have used this recipe for several years and have found it very satisfactory. I have bought eggs from neighbors in the summer when they were worth only ten cents and sold them in the fall for twenty-five cents.

Mrs. M. A. B., Arkansas.

Questions Asked

Will some one please tell me—

How to get rid of black ants?

Mrs. E. E. C., Massachusetts.

How to dye a fur cape black or brown?

ELAINE, Montana.

Anything about lentils and how to prepare or use them?

A FIRESIDE READER, Indiana.

How to keep aluminum teaspoons bright?

Mrs. A. W. T., Kansas.

How to start cranberry-plants and where I can procure them?

Mrs. E. C. M., Kentucky.

Questions Answered

For a Subscriber, Wisconsin

I have removed wagon-grease from light goods (silk or wool) by placing a clean blotter under the spot and applying chloroform with a small sponge or cloth. Rub gently and continue until all trace of grease has disappeared. The blotter will absorb all the grease.

Mrs. H. W. K., Nebraska.

For Mrs. E. T. C., Ontario

To preserve sweet cider, heat it to the boiling-point and seal in glass fruit-jars and the cider may be kept indefinitely.

Mrs. H. N. K., Nebraska.

For Mrs. M. M. B., Missouri

To rid the house of fleas, scatter a good-sized bunch of fresh pennyroyal over the floor. It is best to attend to but one room at a time, strewing the green herb around and closing the room tight for two days, after which the herbs should be gathered up and burned. The process may be repeated if necessary. If it is impossible for you to get the fresh pennyroyal, buy oil of pennyroyal, put it into boiling water and scrub the floors and woodwork with it.

Mrs. A. V. C., California.

Orange-Flower Water, for B. W. M. New Jersey

Eight drops of oil of neroli, two drams of rectified alcohol, one half dram of magnesia. Rub the whole together in a mortar, gradually adding a pint of distilled rain-water. Filter the liquid through white blotting-paper and it is ready for use.

For Mrs. J. F. E. O., Illinois

One of our readers was good enough to send the windmill lace design that you requested. As soon as you send me your full name and address I shall take pleasure in forwarding it to you. EDITOR.

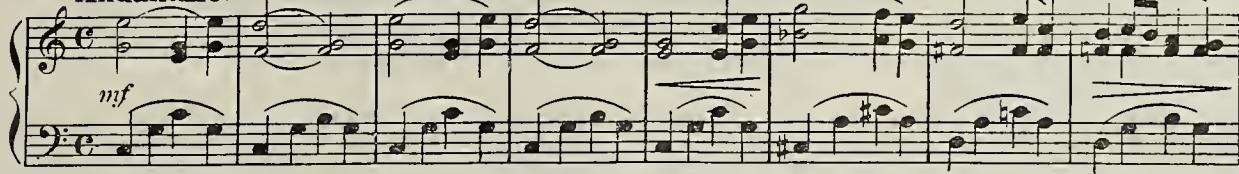
Star of Love

Meditation

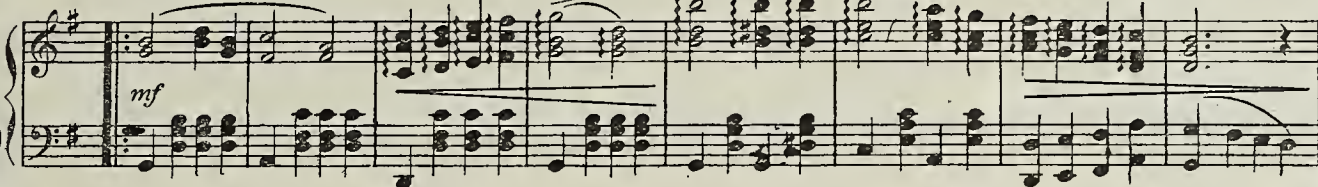
M. GREENWALD

Composer of "Stilling the Storm," Meditation;
"Soul's Awakening," Reverie; etc.

Andantino.



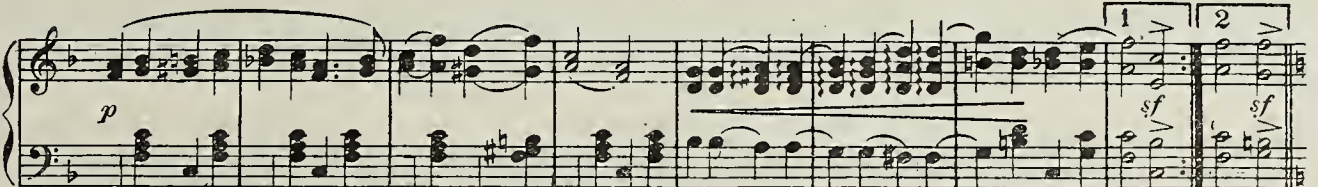
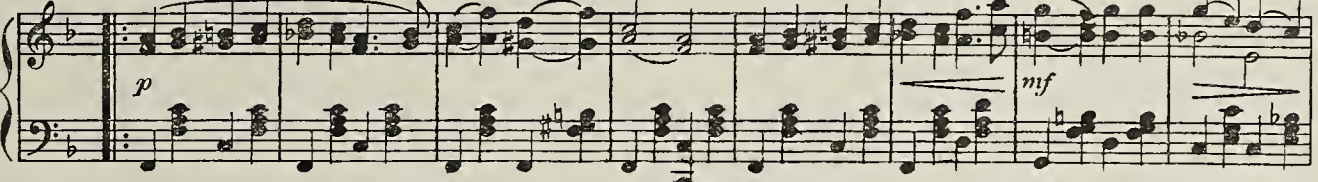
Piu mosso.



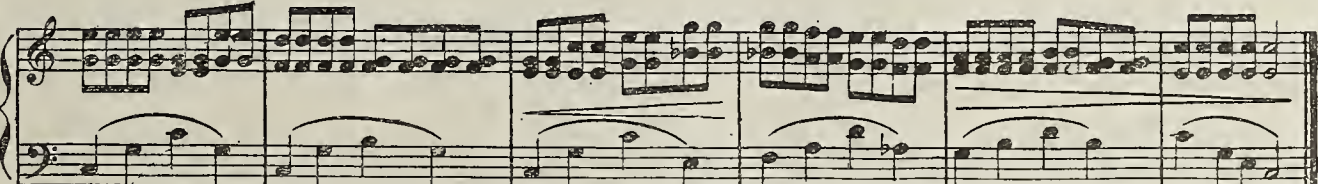
Tempo Primo



Meno mosso.



Tempo Primo.



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TURN OVER TIME When Nature Hints About the Food

When there's no relish to any food and all that one eats doesn't seem to do any good then is the time to make a turn over in the diet, for that's Nature's way of dropping a hint that the food isn't the kind required.

"For a number of years I followed railroad work, much of it being office work of a trying nature. Meal times were our busiest and eating too much and too quickly of food such as is commonly served in hotels and restaurants, these together with the sedentary habits were not long in giving me dyspepsia and stomach trouble which reduced my weight from 205 to 160 pounds.

"There was little relish in any food and none of it seemed to do me any good. It seemed the more I ate the poorer I got and was always hungry before another meal, no matter how much I had eaten.

"Then I commenced a fair trial of Grape-Nuts food, and was surprised how a small saucer of it would carry me along, strong and with satisfied appetite, until the next meal, with no sensations of hunger, weakness or distress as before.

"I have been following this diet now for several months and my improvement has been so great all the others in my family have taken up the use of Grape-Nuts with complete satisfaction and much improvement in health and brain power.

"American people undoubtedly eat hurriedly, have lots of worry, thus hindering digestion and therefore need a food that is predigested and concentrated in nourishment."

Read "The Road to Wellville" in pkgs. "There's a Reason."

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This rifle is harmless. It uses no powder—just air.

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These fine air-rifles are provided with pistol-grip, true sights, and are so strongly made that it is almost impossible for them to get out of order.

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| Rainbow | Carry Mary Harry, Big Hit |
| My Pony Boy | I've Got Rings on My Fingers |
| Red Wing | Down in Jungle Town |
| Just Some One | I Wish I Had a Girl |
| Red Head | Yip-I Addy-I-Aye |
| Star of the East | By Light of Silvery Moon |
| Oh! You Kid | Sweet Bunch of Daisies |
| Senora, A Dandy | Silver Threads Among the Gold |
| Smarty, Kid Song | My Wife's Gone to the Country |
| Baby Doll | That's What the Rose Said to Me |
| Dreaming | Put On Your Old Grey Bonnet |
| Are You Sincere | Way Down in Cotton Town |
| No One Knows | Isn't That Enough For You |
| Honey Boy | I Remember You Napanee |
| Daisies Won't Tell | I'm Bringing Up the Family |
| Molly Leo | Be Jolly Molly, March Song Hit |
| Beautiful Eyes | Lonesome |
| Always Me | The Land of To-Morrow |
| That Italian Rag | Cubanola Glide, Great Hit |
| Garden of Dreams | I Love My Wife But Oh You Kid |

INSTRUMENTAL—Music for Piano or Organ

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|---------------------------|--------------------------|
| Kiss of Spring, Waltz | Wild Cherry, Rag |
| Sicilian Chimes, Reverie | Frog Legs, Rag |
| Let Er Go, March | Love Sparks, Waltz |
| Rainbow, Two Step | Moon Winks, Three Step |
| Star of Sea, Reverie | Maple Leaf, Rag |
| Morning, Cy, Barn Dance | Beautiful Star of Heaven |
| Turkey in the Straw | Pen Hur Chariot Race |
| Red Wing, Two Step | Kerry Mills, Barn Dance |
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OUR YOUNG FOLKS



Out on the Catnip Hills

By Fannie Medbury Pendleton



ELISABETH grasped Shady tightly and started down the lane. Shady was a tiger kitten who was perfectly contented to be carried about under the little maid's arm for hours at a time. Sometimes he rode on her shoulder, blinking his yellow eyes in the sunshine.

Often he scurried on ahead, chasing a dry leaf that was blown along by the spring breeze. No matter where his little mistress went, Shady thought he must go, too.

To-day they crossed the wide field, thick with four-leaf clovers, and turned their steps toward the brook just beyond.

This was an enchanted spot, for the little purling stream sang all sorts of fairy songs that the child loved to hear. And the birds seemed to love it, too, for they built their nests in the great willows that grew along the banks and lifted up their sweet voices in tune with the music of the brook.

"There are the pussy-willows," cried Elisabeth, who had caught sight of the wands edged with the furry, gray buds.

She sat down beneath a tree, for it seemed to her that she had suddenly grown very tired and very sleepy.

"We will rest a moment, Shady, dear," she said.

Shady jumped down from her shoulder and curled up into a fuzzy, striped ball in the little maid's lap, where he settled himself for a nap and purred loudly, and in a second he was asleep.

Elisabeth sat very still, leaning back against the trunk of the tree and gazing up into the blue sky. She began to count the clouds, and had counted ever so many of them when all at once she heard a tiny "meow."

Elisabeth started, and looked down at the ball of fur in her lap. No, it was not Shady, for he was fast asleep. Then she heard it again—not one little "meow" this time, but a great many little "meows" as if ever so many kittens were close by. They were all purring, too.

"Oh," cried Elisabeth, "where can they be?"

She looked all about her for the strange kittens, but there was none in sight. The purr grew louder and louder, and now it sounded right over her head. Elisabeth looked up into the branches of the willow, and what do you suppose she saw? On every branch sat two rows of tiny gray cats, and they were so small they could easily have curled up, several at a time, inside her mother's thimble. And, would you believe it, every one of them was looking down at her and winking his eyes.

"I didn't know—" began the little girl in great astonishment.

"Of course, you didn't. How should you?" said a different voice, so near that Elisabeth jumped again, for Shady had awakened from his nap and was actually talking to her.

"Of course, you didn't, but I did. What do you suppose I brought you here for, anyway? Come down, Pussy-Willows," he called to the little gray cats. "Come down, and we will show her how we can chase our tails."

"But you're fastened on," objected the astonished Elisabeth.

There was a little purring laugh, then a great scurry, and down they came, scrambling, almost falling over each other, until they stood—hundreds of them—on the ground in front of Elisabeth.

At a signal from Shady they began to whirl, and Shady whirled in the middle. Around and around they flew, faster and faster, until all that Elisabeth could see was a streak of silver gray with a big brown spot in the center. She clapped her hands and shrieked with delight. They whirled and they whirled, then stopped as suddenly as they had begun, and one of them ran up and whispered in Shady's ear.

"The very thing," said Shady. Then he turned to Elisabeth. "Get on my back, little mistress," he said, "and we will show you the land of the fairy cats."

Beth climbed on Shady's back. He seemed to be almost as big as a good-sized pony. And away they went—oh, so fast—they

themselves were sent to live on the earth without any tails at all.

Just as Elisabeth was growing rather tired, she saw before her what seemed to be a forest, but it smelled exactly like catnip. Shady and the gray cats sniffed with delight, and then Elisabeth saw that the trees were great catnip plants, growing closely together. "This is the royal park," said Shady. "We are now in Cat Land and you will see the royal castle very soon."

As they passed along, Elisabeth began to notice a rushing sound, and, when the trees opened, she saw a great river which fell over massive rocks and rushed down the valley. Elisabeth rubbed her eyes, for, will you believe it, it was a river of fresh milk, and just below the falls a dozen or more cats were busy lapping up whipped cream. They crossed the silver bridge and saw before them the royal castle of Cat Land.

It was built of pure white marble, ornamented with silver, and on the terraces soldier cats in red uniforms with silver trimmings marched back and forth.

As they mounted the marble steps Shady spoke to the guard, and he motioned for them to pass. Farther down the hall they were met by another cat, also in uniform, and as he opened a great door for them, he called:

"The Lord of the Catnip Hills begs leave to present the earth-child, Elisabeth."

Elisabeth was rather bewildered, and she looked around to see the great lord, but the little gray cats had remained outside, and there was no one near her but Shady. Shady looked very important indeed and he was walking in a dignified manner, carrying his tail gracefully over his arm. Now he led her forward to the end of the great hall, where the queen of Cat Land sat on a throne carved from a single immense cat's-eye.

The queen's fur was of the softest silvery gray, and she wore a purple mantle and a silver crown.

The queen welcomed Shady, who was a very important person in Cat Land and was called the Lord of the Catnip Hills, and he knelt and kissed her paw. Then she spoke very kindly to Elisabeth and invited her to attend a royal rat hunt the next morning.

Then the queen called a cat who was dressed like a nurse, and she took Elisabeth to her room and brought her the most delicious bread and milk that she had ever tasted. After she had eaten it, the cat helped her to undress and tucked her into a lovely white bed. She had no sooner fallen asleep

when something soft began to rub against her cheek. She opened her eyes and, instead of Cat Land, she saw the green fields and the magic brook and the great willows, and Shady was on her shoulder purring loudly.

"When did we come back, Lord of the Catnip Hills?" she asked him. "And where is the beautiful queen?" But Shady only purred louder and never said a single word.

She looked up. There were the pussy-willows sitting on their branches and there was not even a yellow eye among them—no, nor a single tail to chase. Elisabeth was rather disappointed. She picked up Shady and started home. It felt like dinner-time.



"Elisabeth sat very still, leaning against the trunk of the tree"

seemed scarcely to touch the ground. At length they came to a great swamp where hundreds of brown cattails were growing. Shady spoke to them in the fairy language, and they bent and twined themselves into a bridge, over which Elisabeth and the cats passed without a single wet paw.

When they were out of hearing, Shady told Elisabeth how all these cattails were once growing on real cats. But the cats had behaved very badly and actually made war on the queen. The queen sent her army against them, and they were all captured. Then their tails were cut off and planted in the swamp as a dreadful warning, while the cats

Let's Pretend

BY ANGELYN E. ALEXANDER, AGE ELEVEN
Let's pretend that we are fairies
Living in the dell,
Sleeping in the pretty daisies
Or the sweet blue-bell.

Let's pretend there are lots of fairies
Living down our way,
Let's pretend that we have servants
Who'll do anything we say.

Cousins Wishing to Correspond

I AM not going to write you a letter this time, for there isn't space enough. Instead, I shall print a few of the names and addresses of the boys and girls who are anxious to exchange cards with some of the cousins or correspond with them. Here they are: Blanche Bragg, Box 95, East Tilton, New Hampshire; Olive Mangold, age fifteen, Box 173, Carrollton, Pennsylvania; Doris J. Nickerson, 146 Standish Avenue, Plymouth, Massachusetts; Effie Gingery, age fifteen, R. R. 3, Box 15, Glyndon, Minnesota; Alice Phillips, age ten, R. F. D. 3, Cecil, Ohio; Agnes White, age fifteen, Pasco, Florida; Bernice Eliot, age thirteen, 1505 West Austin Street, Nevada, Missouri.

I have just received a new supply of club buttons, so any boy or girl desiring to become a member can obtain a button of membership for five cents by addressing Cousin Sally's Club, FARM AND FIRESIDE, 11 East 24th Street, New York City. When writing, be sure to state your age, as the club is only for boys and girls who are seventeen years of age and under.

Trusting that all of my boys and girls will compete in this month's contest,
Faithfully,
COUSIN SALLY.

Camera Prize-Winners

CLARICE WOODBURN, age ten, Riverside, Iowa, and Frank Cedoz, age thirteen, East Toledo, Ohio. Below are their poems:

Our Picnic

BY CLARICE WOODBURN, AGE TEN
We had our little picnic
Beneath the apple-tree,
The dolly and the teddy-bear
Both came and had some tea.

The tree gave us some apples,
And mama gave us cake;
It was the very bestest
That any one could make.

My dolly ate so very much
It made her awful sick.
Teddy ran for the doctor
And they came back real quick.

The doctor gave her candy pills
Which tasted good she said,
And pretty soon my doll was well
And hopped right out of bed.

School is Over

BY FRANK CEDOZ, AGE THIRTEEN
School is over and vacation has come,
Now for the good times, the play and the fun.

Voices are calling the children to-day—
Listen and hear what they have to say.
The birds seem to call from the top of a tree:

"Come out, boys and girls; be happy and free."

Far out in the meadow with dainty perfume,
The flowers are saying, "Come here where there's room."

The forest and valley, the mountain and sea,
Unite in the chorus, "the children are free."

Monthly Prize Contest

As a first prize to the boy sending in the best true story of "How I Spent the Fourth of July" we will give a splendid camera all ready for use. For the next five in order of merit we will give supplementary prizes of beautifully illustrated books and water-color paints.

As a first prize to the girl sending in the best true account of "Vacation Time and How I Spent It" we will also give a splendid camera. For the next five in order of merit we will give supplementary prizes of paper dolls and water-color paints.

Rules for Entering Contest

The work must be your own, and each composition submitted to Cousin Sally must be indorsed by your father, mother or guardian to show that the work is original.

The facts in your story must be true. I want you boys to tell me in your own words just how you spent the Fourth, and I want you girls to tell me all you do in your leisure time during vacation. I am sure many interesting things happen that you could write about, but please bear in mind that your story must be true—not one that you have made up.

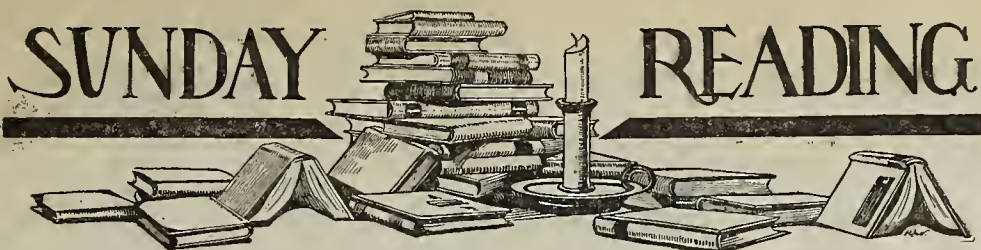
Do not write more than 400 words. Write in ink on one side of the paper only. Write your name, age and full address at the top of the paper.

The contest is open to every boy and girl who is seventeen years of age and under.

The contest closes August 4th. Address Cousin Sally, FARM AND FIRESIDE, 11 East 24th Street, New York City.

If you send for a club button the same time that you enter the contest, write your name, age and address on a separate sheet of paper, as well as on your composition.

SUNDAY READING



Little Inspirations

By Fannie Medbury Pendleton

EVERY ordinarily constituted person is afflicted at times with that state of mental depression called the "blues." With some people it is the result of peculiar temperament; in others of physical disadvantages, of unsatisfying environment and adverse conditions in life. Then, again, the blues are often the reaction from extreme joy of an excitable and highly-strung nature, where the pendulum is ever swinging back and forth from the heights to the depths.

Cultivate Cheerfulness

Although in many cases it is extremely difficult to combat this unfortunate tendency to morbidness, it is possible for a person of average will to lessen its hold and overcome it in the end.

Self-pity is fatal if one would cultivate a cheerful disposition.

We are largely what our minds make us; we are the outward evidence of our mental condition. A cheerful attitude toward life and what it has in store for us is reflected in our faces, in our daily words and acts, and most directly in our physical state. The mind and body are so intimately related that each is able with but slight encouragement of will to react upon the other.

The body obeys the mind just so far as it is properly adjusted in its relation to it. It is not in accordance with Nature's scheme that either should assert itself at the expense of the other. The body is a capable servant when it is wisely directed by the mind.

The attainment of this result is not to be realized at once; it is the outcome of a gradual but continual adjustment.

Habits of Mind

are much more easily formed than habits of body, for the mind is directly responsive to impressions, while the body must receive them through the agency of the mind.

As the will controls the mind, or should be made to control it, the first step, therefore, must be a strong, unswerving determination to maintain a cheerful outlook on life. This is possible in different ways, according to the temperament of the individual. To some faith gives the needed assistance; in other cases a change of scene or the building up of a cheerful atmosphere for a time is the key-note to the situation. We are all of us more or less the playthings of mental suggestion. It may proceed from external sources or be the outcome of something within ourselves. But it was not intended that our days should be sad or happy, according to the relative proportion of unpleasant or cheerful events. Is it not rather the confession of weakness to allow ourselves to be tossed back and forth by the worries and hindrances of our daily life?

A great wave of sorrow may sweep us off our feet for the time—even the strongest of us—but it is usually true that the best in us rises under its influence to bring out the better depths of our natures and to combat the selfishness that would make all men carry not only their own woes, but ours.

All people are wonderfully changed by a great sorrow; but it is only the weak that are made selfish by passing through the Valley of Grief. And though it is indeed the Valley of the Shadow, yet it throws for a time a strange, new light upon the pathway, by which the events of life stand out in their true proportions. We realize the triviality of our daily trials.

With some natures, after the first sharpness of grief is gone, these things regain their former importance, but others never quite forget the glimpse at what is really worth while, and it is these latter that are made more human and grow kinder to others.

There is the great Brotherhood of Sorrow into which we must all be initiated at some time, and in which we are all of equal rank.

But in the little worries and annoyances there lies an adverse power which we are too prone to ignore. Happiness, which is found, after all, in making the wisest use of life, is more influenced by trivialities than by great occurrences. Even, when it is beyond our power to alter surrounding conditions, it is possible to hold ourselves upon such a

mental plane that these waves of worry only touch our feet.

Such an attitude on the part of a morbidly-inclined person is nothing less than a battle royal, but it is a battle well worth fighting. A depressing person is exceedingly selfish, a cheerful face radiates sunshine. There are enough cloudy days for all without inventing murky skies for the pleasant ones. Strange to say, it is the little things that turn the scale. A cheerful suggestion at the right moment works wonders. It may be a smile or a kind word or a pleasant greeting; it may be some little pleasure or a sentence read by chance at an idle moment, but it is enough to turn the scale. The people about us are like mirrors, reflecting our moods. Kind words and kind thoughts are contagious and are passed on down the great stream of life.

Think of Pleasant Things

It is well to gather pleasant things and pleasant thoughts about us; not to let our minds dwell upon evil, unless we can do something to help. This does not mean to shut one's eyes to the sorrows of others, but to be sure that one is not the medium through which unnecessary sorrows are spread upon those whose lot it is to be influenced.

There is much said about the need for merciless self-analysis, but it is unwise and unjust to condemn one's self too harshly. We need encouragement. We all do foolish things, but foolish things have been done since the first days of this old world and there are many more waiting to be done. We are not so important that we need torture ourselves long after the little deed that we regret is forgotten. People are too busy to pay much attention to it beyond the passing moment.

And just as we are all huddled together in one world, just so are our victories and encouragements and inspirations passed on to others to give them the strength to fight and win the Battle with the Blues.

A Persistent Faith

A PERSISTENT faith is a blessing most to be desired. It is easy enough to have faith when the benefits thereof come thick and fast, and the advantages thus derived are easy to see. But how is it when we cannot see the results? It is easy to say to ourselves, "We walk by faith, not sight," but this does not always calm the despairing cries of our hearts, especially at times when the results of our faith seem nil. We begin to wonder whether our hopes are in vain and our expectations doomed never to be realized.

If, however, it is true that "we walk by faith," we must not always expect to see the results. The trouble with most of us is that we wish to be convinced by sight as well. Our faith wavers and falters because we cannot see the final outcome. We ought to be content to take each step as we come to it and not ask to see the final goal. There will be plenty of time for the last step when we get to it, and in all probability when that time comes God will see to it that we are given sufficient light upon that part of our way.

"Commit thy way unto the Lord, trust also in him, and he will bring it to pass." The little boy who walked with his father along a lonely road at night was afraid because the lantern they carried showed such a little of the path ahead. The father reassured the boy that while the lantern might not shed enough light to give them a view of the whole way at one time, still if they walked right on there would be light enough to reach to the end of the journey.

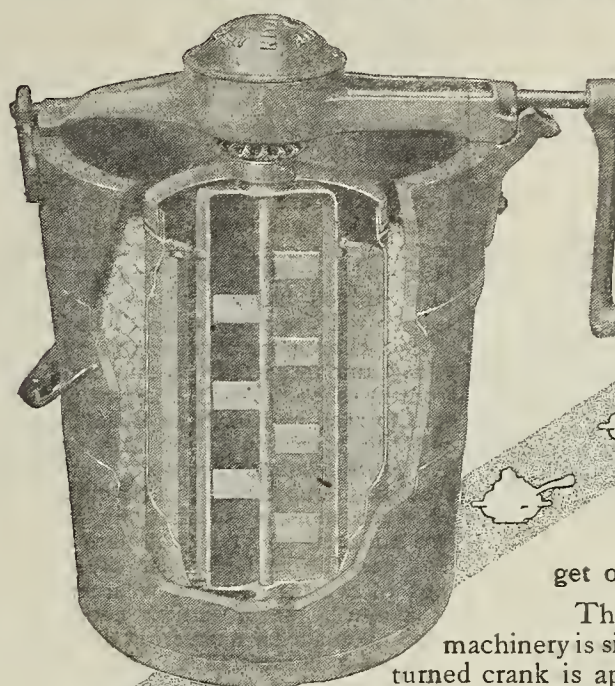
We may not see the outcome of all we do at the time we do it. We may not see the end of the way in which we are traveling. But our faith ought to be sufficiently persistent to enable us to rise above this difficulty. It ought to light us clear through to the end of the way in which we walk—not all at once, to be sure, but little by little. And if, with our failure to see the final outcome of our hopes and ambitions, it does not seem as though our prayers were being answered, let us not cease praying, but renew our supplications with added earnestness. Let us persist in our faith, confident that it is to the believing heart that all things come.

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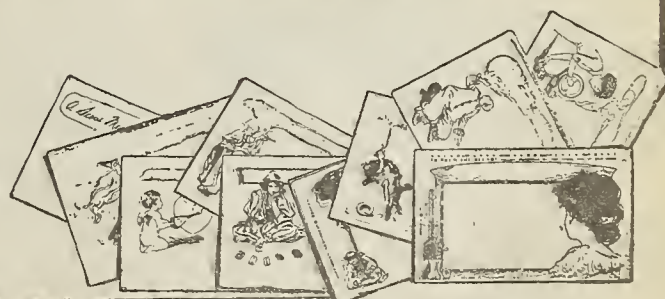
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Springfield, Ohio



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"Then the question was, what should we use for the morning drink? Tea was worse for us than coffee; chocolate and cocoa were soon tired of; milk was not liked very well, and hot water we could not endure.

"About two years ago we struck upon Postum and have never been without it since.

"We have seven children. Our baby now eighteen months old would not take milk, so we tried Postum and found she liked it and it agreed with her perfectly. She is today, and has been, one of the healthiest babies in the State.

"I use about two-thirds Postum and one-third milk and a teaspoon of sugar, and put it into her bottle. If you could have seen her eyes sparkle and hear her say 'good' today when I gave it to her, you would believe me that she likes it.

"If I was matron of an infants' home, every child would be raised on Postum. Many of my friends say, 'You are looking so well!' I reply, 'I am well; I drink Postum. I have no more trouble with constipation, and know that I owe my good health to God and Postum.'

"I am writing this letter because I want to tell you how much good Postum has done us, but if you knew how I shrink from publicity, you would not publish this letter, at least not over my name."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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See my Split Hickory Auto-Seat, color-illustrated in book. Prices will astonish you. All sold on 30 Days' Road Test—2 Year Guarantee. Also harness. Write me now.

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ARE you satisfied with your present income? Are you so fixed that you would not accept a chance to make more money simply by making use of your spare time? At this time, when prices are soaring higher and higher, these are questions of the greatest importance.

If you feel that your vacation this summer must be limited because of a shortage of funds, or if you feel that you would like to indulge in some other luxury for which you have been wishing for a long time; in fact, if you want to make money for anything, we can help you.

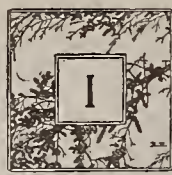
We only ask your spare time, but if you are able to devote all your time to the work, so much the better for you and for us. Some who have already taken hold are now making \$10.00 per month, some \$10.00 per week and some \$10.00 per day, dependent upon the amount of time given to it. You also can do it.

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The Marketing of My Peach Crop

By Herr von Hornberg-Boennigheim



AM a German minister of the gospel. Having arrived in this country about thirty years ago, I had, at first, to be content with very poor charges in out-of-the-way places which paid me real starvation salaries. In 1882 I lived in the wildest part of Gasconade County, Missouri, in the "bush." It was half a mile to the nearest neighbors, and the members of my church were scattered over a territory more than twenty miles in diameter. All of them lived on lonely farms laboriously cleared out of the everlasting oak woods. The mill, store and post-office were three miles away, while, to reach the railroads, I had to travel twenty-five miles in one direction and nearly forty in the other. The Gasconade River, a tributary of the Missouri, however, was only a little over three miles away. This proved lucky for me. For, otherwise, I would not be able to tell the story which I have now to relate.

My church members being all poor bush farmers, my fixed salary amounted only to one hundred and eighty dollars. But, from October to April, I taught the children of the church members to read and write in German and English, some arithmetic and the catechism. For this extra work I received twenty-five cents a month from each child attending my school. This brought me about eight additional dollars a month for a period of seven months, so that my total income came up to about two hundred and thirty dollars a year.

I had the rent-free use of a superannuated parsonage, the roof of which, in rainy weather, evidenced the characteristics of a sieve. In a similar condition were a number of out-houses, or sheds, answering for a hay-loft, an oat-bin, a cow-pen and a horse-stable. One of the sheds, a roomy one, was not in use, but was temporarily put into commission by me on the extraordinary occasion about which you shall soon hear.

Firewood I had in plenty. It cost me nothing, since the church members, once a year, came to fell trees and split the wood for the church and the parsonage—both of them tumble-down block-houses—in sufficient quantities to last for a whole year. It was an exceedingly poor and lonely place.

Nevertheless, there was one thing connected with that parsonage which many city folks would have coveted. This was a large peach-orchard, numbering about two hundred good-sized trees of the choicest varieties, such as only the climate of southern Missouri can produce. They were in full bearing and overloaded with fruit. The difficulty, however, was that I had enough to do to attend to my scattered congregation and, therefore, little time to spare. Besides, the only place where it was thought possible to market the peaches was the store, three miles away. The storekeeper, however, did not think that he could afford to pay more than three cents a pound for the blackened and unsightly dried peaches which the farmers of that region brought to him. This low price was caused, partly, by the necessity of hauling the crop a distance of twenty-five miles, over the roughest kinds of roads, to the nearest railroad station, in order to ship it to St. Louis where only very little was offered for those unsightly, sun-dried peaches.

When I looked at those beautiful peach-trees in my orchard and the enormous quantity of first-class fruit upon them, I began to think and figure. I was sure I could find a way to bring the dried fruit to market in better condition, and to realize double the price that was offered by that storekeeper in the wilderness. When the peaches showed signs of ripening, I was already busy making my preparations.

The first difficulty was to get help enough to gather the whole crop. In those sparsely-settled woods there were few grown-up people to be had who could spare the time to work for others. One day I was reminded of my school-children. Accordingly I went to their parents and offered to pay the boys and girls—aged from ten to fourteen years—twenty-five cents a day for the gathering and preparing of the fruit. At that price I got twenty youngsters to help me during the harvesting of the peach crop, which extended over two weeks. Their wages amounted to about sixty dollars. In addition I hired three men at one dollar a day. That increased the price of labor to ninety-six dollars for the gathering and drying of the peaches alone.

Before the harvesting began I had bought and set up an evaporator at the price of fifty dollars, and fifty bags at a cost of twelve dollars and fifty cents. My expenses already footed up to one hundred and fifty-eight dollars and fifty cents. The storekeeper jeered at me and wanted to know how I expected to get that much money out of my peach crop, when he was going to pay me only three cents a pound. In reply I advised him to hold back his remarks until I came to him to offer my crop for sale. This, by the way, I had no intention of doing.

Among my preparations were, also, included the means of conveying my peaches to market. The farmers asked entirely too much for three wagon-loads of peaches to be taken to the railroad station. Besides, railroad freight for perishable goods was also a matter to be considered. Instead of arranging for that kind of transportation, I had, on the quiet, bought five dollars' worth of lumber, nails and screws, three miles away, on the banks of the Gasconade River. Inside a

shed I constructed a flat-bottomed kind of a ferry-boat. In reality it was only a low box with an air-tight fitted and screwed down bottom and lid. It measured sixteen feet in length, seven in width and eighteen inches in depth. Both ends slanted upward. There was room enough to load fifty bagfuls of dried peaches, weighing one hundred pounds each, into the center portion of that ark and leave a three-foot space vacant at each end. Two men, one at each end, were to keep the strange vessel moving and save it from stranding. This contrivance of mine was locked into a shed at the river's edge. Nobody knew for what purpose I had built it, nor did my church members have even an inkling of its existence.

The peaches were ripe and the gathering of them began. The boys picked them, while the girls halved, stoned and spread them on the trays attached to the evaporator. Firewood cost nothing. One man attended the evaporator, while two others carried the fruit, in baskets, from the boys to the girls, and the filled trays from the girls to the evaporator.

It took my gang of workers just twelve days to gather, split and dry five thousand pounds of the choicest peaches ever grown and evaporated. When the quality of my goods was observed by the boys and girls, they told their parents at home about it and soon the farmers came to wonder at the difference in the appearance of their dried fruit and mine. However, the storekeeper bragged that he would not pay that "fool parson" more than three cents a pound.

While the work was going on I asked two of the young men helping me whether they would like to see the city of St. Louis free of traveling expenses. On the condition that they should not divulge it to others, I told them of my plans and offered them two dollars a day (quite an extraordinary pay at that time and in that region) if they would guide my ferry-boat down the Gasconade and Missouri Rivers to St. Louis, where I proposed to sell the peaches. I promised, also, to pay their return fare on the railroad. Of course, they jumped at the idea.

Not a little enthusiasm had been created among my church members on account of their pastor's enterprise. Hence, when the day came that the fruit was ready for shipment, and they heard what I intended to do with the crop, partially out of spite against that stingy storekeeper who would not pay more than three cents a pound for their fruit, they offered to convey my fifty peach-bags in three farm-wagons to the river free of cost, as that could be done after working hours in the evening.

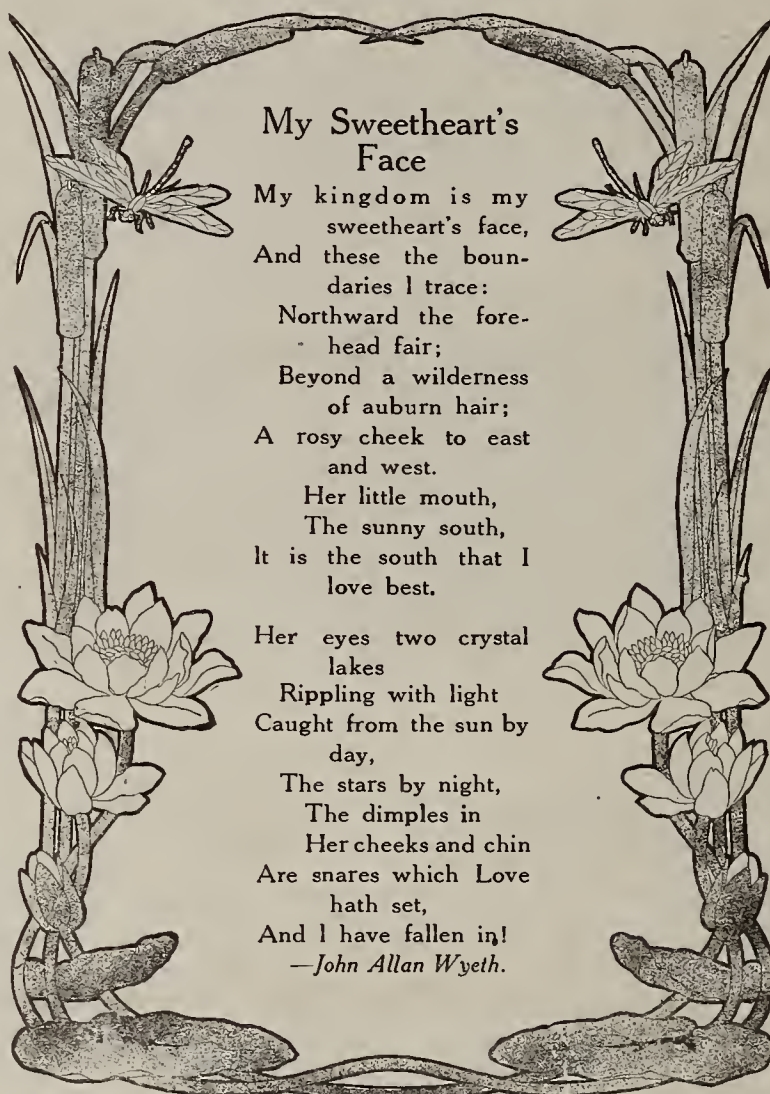
Thus we started one fine evening, launched the flat-boat and loaded the fifty well-filled bags—each measuring about two and a half feet in length and about fifteen inches in diameter—in three layers into the central portion of the boat, spread borrowed water-tight wagon-covers over them and placed some boards on top of these. I sat down on these boards, while the two young men took their positions in the two ends and, with long poles in their hands and short paddles at their feet, pushed the craft into the middle of the stream. After that they had little to do but to see to it that we did not run against a rock or snag, and did not get stranded on a sand-bank.

We calmly floated down until we came near to the place where the Gasconade pours its waters into the Missouri. Here we landed, tied the ferry to a tree and went into camp, preparing our supper. Early on the next morning we again started on our way, and in less than three days were in St. Louis, where I sold my peaches at the wholesale price of eight cents a pound to a jobber who eagerly took the whole lot before any one else could get sight of them. We abandoned the five-dollar ferry-boat, to the delight of the street urchins.

After a day of sight-seeing for the young fellows, I took them, on the train, to Cuba, on the Frisco line, which was the nearest railroad station to our homes. Here we found our horses in a livery stable, having previously arranged for that, and, after an exceedingly rough ride over innumerable small tree-stumps and through a number of creeks, up and down one steep hill after another, we reached our several homes.

I had received four hundred dollars for my crop of evaporated peaches. The storekeeper would have paid me only one hundred and fifty dollars, which would have been thirty-seven dollars less than my total expenses. My profits on the outlay of one hundred and eighty-seven dollars amounted to two hundred and thirteen dollars. In addition thereto I had the evaporator left on my hands, and that in first-class condition.

Now the farmers all wanted to follow my example. I let the members of my church have the use of my evaporator at a rental of one dollar a day, while outsiders had to pay me two dollars a day. When the peaches of the farmers were all gathered, the apple crops came in. Thus, for many a week, that evaporator became a new source of income to me and, before winter set in, had paid back to me more than its own cost. In this way my profits on the peaches were, really, about seventy dollars higher than the sum mentioned before, and they amounted to nearly three hundred dollars, or more than I received from my church members in annual salary and school-fees.



My Sweetheart's Face

My kingdom is my sweetheart's face,
And these the boundaries I trace:

Northward the forehead fair;

Beyond a wilderness of auburn hair;

A rosy cheek to east and west.

Her little mouth,
The sunny south,
It is the south that I love best.

Her eyes two crystal lakes
Rippling with light
Caught from the sun by day,

The stars by night,
The dimples in
Her cheeks and chin
Are snares which Love hath set,

And I have fallen in!

—John Allan Wyeth.



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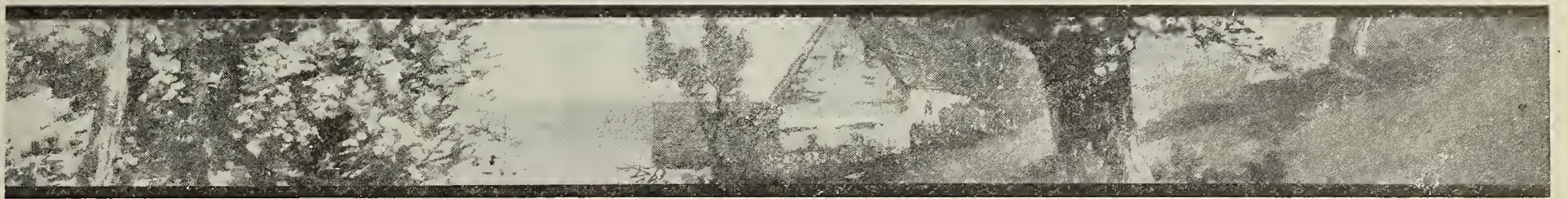
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FARM^{AND}FIRESIDE

THE NATIONAL FARM PAPER



ESTABLISHED
1877

JULY 25
1910



Theodore Roosevelt's High-Bred Cows at His Country Place, Sagamore Hill, Near Oyster Bay, New York

Most of us, from our reading of the newspaper despatches, have come to think of Sagamore Hill merely as a sort of summer resort for anxious politicians. 🌿 As a matter of fact, it is a real country home. 🌿 While one would perhaps be straining a point to class Mr. Roosevelt as a fellow-farmer, yet the glimpse of the place that is given by the photograph above shows clearly that our many-sided ex-president is an appreciator of the good things of rural life.

A Visit With the Editor

Y ou all remember the story of the man who thought he could lick almost any one?

"I can lick anny wan in this school district!" he shouted. No reply from the crowd. "I can lick anny wan in the township!" he averred, doubling up his fists. No denial of his championship. "I can lick anny wan," he continued, glaring at the crowd, "in Woodbury County!" Silence seemed to give consent. "I can lick," he proclaimed, "anny wan in the state of Iowa!" Still nobody came forward for treatment. "I can lick anny wan," he yelled, "livin' under the folds of the Star-Spangled Banner, includin' Alaska an' the Insular Possessions!" A peaceable-looking man advanced, planted a blow on the point of the challenger's jaw, and things went dark before the bully's eyes. When they brought him to, he diagnosed his own case. "I made the mistake," said he, "of thryin' to cover too much territory!"

I don't vouch for the truth of this story, but I know what made me think of it. It was a letter from Mr. A. W. Peterson, a reader at Novelty, Washington. Here is Mr. Peterson's letter:

"In FARM AND FIRESIDE of June 10th I saw a challenge to the world to show a tree of the kind bigger than the Pre-Revolutionary Pear-Tree. I don't think Mr. Herbert Quick has seen very much of this world. As a boy in Sweden I used to pick pears from a tree which took two men to reach around its twelve feet of circumference. Visiting my old home two years ago after thirty years' absence, I saw the same old pear-tree still good and sound, still growing and still bearing barrels of pears every year. My wife's great-grandfather told me that the tree was at least two or three hundred years old. Between Stockholm and Gothenburg I saw an old pear-tree that had a hole in it big enough for two bears to nest in, instead of a pair of flying-squirrels. People told me that the tree was probably five hundred years old, but still bearing fruit. Coming through England and Denmark I saw some very old orchards and big fruit-trees. When a man comes to challenge the world he has got to go some!"

Yes! He does have to go some. Like the man aching for a fight, I seem to have taken in too much territory. But isn't it worth being knocked out, to have drawn out that letter of Mr. Peterson's? Think of a fruit-tree two hundred, three hundred or five hundred years old still bearing! And think of the pear-blight, thrips, borers, scale insect and all the ills that pears are heir to, which makes it hard to make our modern, improved pears live to bring in profit.

If I ever go to Sweden, I hope to hunt up Mr. Peterson's tree.

I still insist, however, that our Sacred Pear is the champion of the United States—until I am floored again. I may be floored, for a man has got to go some who challenges All-America too; but I am not ready to yield the palm yet. Mr. Harvey Whitaker, of Batavia, Ohio, enters in the contest a fine old veteran on his farm. Here is what he says: "Seeing your challenge in the FIRESIDE in regard to the oldest pear-tree, I wish to state that we have a pear-tree here that my mother remembers as in bearing when she was eight years old, and she is now sixty-eight years of age, which would make it in 1850, and the tree is green and was full of bloom this spring. So I would like to hear from you, as I can date our tree back farther than yours."

Good tree! But Mr. Whitaker didn't quite get the force of Uncle Joe Roach's testimony. Our tree was about as big, he says, in 1861 as it is now. Our neighbor thinks it was set out by his great-grandfather. It is much more than one hundred years old, probably one hundred and fifty, and it is nine feet in girth six feet from the ground.

Mr. A. G. Humphreys, of Phillippi, West Virginia, writes a letter which is interesting to all who love trees and rejoice in their victories over tempest, disease and the rest of the forces which pull them down. "I read with much interest," he says, "your article relative to a West Virginia orchard you have lately planted in Morgan County, West Virginia. I am not going to contest your claim to the big pear-tree, but I want to tell you of an apple-tree growing on the John Patten farm seven miles east of Clarksburg, West Virginia.

"The apple-tree was set out in the spring of 1795. Therefore, it was one hundred and fifteen years old last spring and still defies gravitation by spreading its sheltering boughs twenty feet each way from the trunk. There is nothing to attract notice about it except its age. From neglect, a few larger branches have fallen off by rotting near the trunk, and at the bottom there is a large cavity of dry rot, all of which could be remedied by the judicious use of good Portland cement. Verily a West Virginia apple-tree does take off its hat and settles down to business for quite a while.

"Query: Why don't some enterprising canning company locate in our fine blue-grass section which produces one-hundred-year-old apple-trees and establish a sure century business? Why, indeed?

"Space forbids me telling you of some fine bearing standard peach-trees twenty years old and cherry-trees bending under their fifty, seventy-five and ninety gallons of cherries this year that were set out in a pasture-field in the spring of 1859. Ho! All ye canners take notice; your Eldorado is in West Virginia. Come over and help us."

Don't brag. I've tried it, and it doesn't pay. While that challenge was going through the press, the North Wind seems to have heard about it and went out after the Sacred Pear-Tree's scalp. The news at first was to the effect that it was "all-tore to pieces," and it is injured. One limb eight inches in diameter was ripped off and the symmetrical top was distorted. A tall elm in the track of the gust was leveled and an old apple-tree torn up by the roots.

It made an Iowa man feel quite at home—that wind did. If these things keep up, I shall begin thinking of a cyclone cellar.

All the old apple-trees which we cut back are loaded with fruit—decayed

old fellows sprouting out in green and bending what limbs are left to the very ground under the weight. They remind me of an old man feverishly striving to get something more done before the inevitable happens.

So far the farm promises mixed results. With the young trees, all is distinctly well. We kept out and heeled in about one hundred to use in filling gaps, but we sha'n't need them, I think. Out of about two thousand apple-trees, only three are dead. I cut sprouts thirty inches long from some of these trees on June 20th, just two months after they were planted. Some growth, that. But the cloudburst has washed the hill on which the trees stand, not "ofully" as was reported, but seriously. We shall seed the whole thing in crimson clover soon, and after seeding, we shall sow up and down these places, where gullying is beginning, a mixture of orchard-grass, clover and timothy, so as to establish a sod-mulch belt, running with the wash. And right in the little gullies I shall dribble a line of sweet-clover seed. It seems to like bared subsoil and ought to be at home there. But you never can tell. I knew a man in South Dakota whose farm was foul with mustard. In desperation, he bought mustard-seed and sowed it, declaring that if the farm ran to mustard, he'd go into the mustard business. He'd show the confounded land a thing or two about mustard!

It wouldn't catch, and what came up seemed spindling and weak. My friend was speechless at this proof of the Total Depravity of Inanimate Things. He said that the only way to grow mustard was to sow flax. When I suggested that the flax might sneak in as a weed and run out the mustard, he declined to see the joke.

But if I can only get the sweet clover (*melilotus*) to think I don't want it in those furrows, we shall find it growing six feet high, I doubt not, and stopping the wash.

* * *

Just a few words by way of prophecy—or rather, by way of promise. We are particularly well pleased with the matter we have scheduled for our next few issues, and we believe our readers are going to be just as pleased when it is presented to them.

Perhaps, some time, you have had a sick horse, and perhaps you have called in a veterinarian. As a general principle, that is the best thing to do. But perhaps your "veterinarian" was no veterinarian at all, and you found the doctor was worse than the disease. In the next of his series—in our August 10th issue—Mr. Buffum will take up the problem of veterinary quacks. "Send for a good veterinary physician if one is available. If not, do not fall back upon the faker, but do the best you can yourself," says Mr. Buffum. Then he tells you how to do it—how to be your own veterinarian in all the cases where home treatment is practicable.

Miss Jessie Field, whose work in the schools of Page County, Iowa, has brought national fame to herself and to the county, has written two more articles for FARM AND FIRESIDE. The first of these will appear in an issue soon forthcoming. A little later Dr. M. P. Ravenel will give us another article on bovine tuberculosis and its relation to the disease among human-kind.

Then we have more of those inspiring stories of abandoned farms—another page of them in our next issue. We have, furthermore, another set of letters about money made in side lines—not so many of them, nor so vitally important as the Abandoned Farms fact-stories—that is not to be expected—but fine, interesting, true accounts of money made "On the Side," and how it is done. These will appear soon. Don't miss them.

* * *

A while ago we asked, through a paragraph on the editorial page, for still another kind of experience letters—for letters on cow testing. We heard from so few of our readers about this that we are going to ask the question again. "Who has had experience with cow-testing?"

By weighing each cow's milk and Babcock-testing it from time to time—or having the creamery do the testing—the dairyman can tell just what each is paying him. Without using these absolute methods nobody seems to be able to tell the good cows from the poor ones. Of course, this statement is to be taken with limitations; but the rule seems to be everywhere that as soon as people begin testing their cows they are treated to surprises. The cow that was supposed to be a star performer is found to be in debt for her board at the end of each year, while some meek matron of the herd, about whom the dairyman cared very little, comes to the front as a money-maker. The case of Mr. J. L. Doan, of Barnum, Minnesota, reported in Hoard's Dairyman is typical. "Two years ago last March," he says, "I began weighing and testing, with the result that out of a herd of eleven cows, but three now remain." His best cow would not have brought twenty-two dollars before she was tested; now he knows he could not afford to sell her for one hundred and twenty-five dollars, for the simple reason that the figures show her to be producing four hundred pounds of butter-fat a year.

Cow testing is a comparatively new wrinkle. It is not nearly so widespread as it ought to be. But we are sure that in FARM AND FIRESIDE's nation-wide family there are many that have had experience in this line, working either individually or as members of co-operative testing associations. If you are among the experienced ones, won't you write us, briefly, about your results? Very probably your findings will have real value to others. In that event we want to pass them along, through the columns of the paper. We'll pay for all the letters we print.

Herbert Quick



Vol. XXXIII. No. 20

Springfield, Ohio, July 25, 1910

PUBLISHED
SEMI-MONTHLY

The Murdering Insects

By Vincent J. Youmans, M.D.

FLY-TIME, which might better be called bug-time, as the fly is only one tribe of the great six-legged host that swoops down upon us with the arrival of warm weather, seems a fit season for a little sermonizing on the "Insects and Disease" text. There is, of course, nothing novel in the subject. Every amateur sanitarian of the newspapers, in response to the growing popular interest in medical and hygienic things, has held the fly and mosquito up to popular execration, in appropriately lurid style. The former in particular has been called everything in the calendar—a wolf, a hyena, a serpent, worse than the hydrophobia or tuberculosis germ—and his popular sobriquet, the "common fly," even changed to such a damning label as the "typhoid-fly."

All this is very picturesque, and while it was a novelty folks read and gaped, and perhaps bought two or three screens, and a yard of mosquito-netting to tack over a couple of the thirty-two windows in the house. The more persevering of them may be doing it yet, even, perhaps, extending the line of screen fortifications, but there seems some danger that the sensational and highly spectacular opening of the anti-insect campaign may lead to a reaction and a let-up in hostilities. This would be in every way unfortunate. For, lurid and sensational as have been the charges against *Musca Domestica* (this is the technical name of the common house-fly), he deserves them all and much more.

Indeed, the vocabulary of polite society is quite inadequate to the framing of a fit characterization of this "companion of man," who has dogged his footsteps ever since the days of Noah. To the modern sanitarian one of the saddest events in history is the success of that primeval admiral in securing a pair of flies for the ark. There is no one thing the world could better spare (not excluding rattlesnakes and potato-bugs) than *Musca Domestica*. He has gone ahead with absolute impunity murdering men, women, children and the lower animals since the days of the flood.

He is the dirtiest animal known, and one of the most prolific breeders. Packard has estimated that one fly may have 125,000,000 descendants in the course of a single summer. Each female lays over one hundred eggs at a sitting (or setting), and under favorable conditions these develop into perfect flies in from eight to ten days. The fly's food and personal habits are indescribably filthy. His body is so constructed as to make it an exceedingly efficient carrier of dirt and bacteria. He respects nothing from the butter and milk down the food line, and no pile of refuse is too foul to serve him as a playground. The country fly is just as dirty as his city cousin. The ordinary sty-bred pig is a paragon of cleanliness in comparison. It would be far safer for the farmer to give his hogs the run of kitchen and dining-room than to extend this courtesy to the flies.

Aristotle, whom many of the intellectual aristocracy still swear by, was supposed for many years to have anticipated everything in the shape of knowledge, medieval and modern. He believed, or at least said,

that a man afraid of a fly was about the most insignificant and hopeless variety of coward he could imagine. For centuries people believed this dictum and died for their belief, of fly-borne typhoid and cholera and dysentery and many other infections. Sad to say, thousands of persons are still sacrificed annually, in the same way, and will continue to be until the discoveries regarding insect-borne disease are incorporated in anti-insect legislation, and are more widely impressed upon the popular mind, accompanied by information regarding methods of prevention and defense.

There is no mystery regarding the way in which the fly carries on his nefarious work. Any one can test the question for himself at the small expense of a little white paint and the trouble of catching a few flies alive. Go out to any neighboring heap of garbage or other offensive refuse (find the most offensive one you can), capture a few of its swarm of flies, mark them on the back with the white paint and let them go.

numbers of intestinal bacteria. On a warm day in August two clean saucers were partly filled with milk from the ordinary morning's supply. One saucer was covered with a plate, the other left uncovered. Both were placed on a table in the kitchen where there were some flies. After five hours two flies were noticed in the uncovered milk. The milk was then examined for bacteria. There were twice as many found in that left open to the flies—that is, each teaspoonful of milk in which the flies had bathed contained something over 20,000,000 more bacteria than the sample kept covered. Twenty-four hours later the fly-bath fluid had a distinctly rotten odor, and on the third day this had become extremely pungent and offensive. The covered milk at this time was clotted and had the ordinary, not unpleasant smell of sour milk.

The same test was carried out on two samples of milk in a workman's cottage. The exposed milk in which two flies had been drowned gave off a putrefactive odor within eight hours. It is not difficult to understand from these experiments how in a fly-ridden district diarrheal diseases may be in excess unless care is taken to see that food-supplies, especially milk, are protected from the attention of flies.

On solid food a fly deposits only such germs as may be on its feet and the tip of its proboscis, but flies falling into milk have their bacteria-laden bodies and limbs washed continually in the milk, and freely distributed by their attempts to get out.

These are the facts; indisputable; proved by actual experiment, and demonstrable again at any time for the instruction of the germ skeptic. What can be done?

Two things, at least: Prevent as many flies as you can from breeding in your neighborhood, and keep those that are born from the house and from contact with the food. The following recommendations are condensed from Bulletin 78 of the Bureau of Entomology (United States) and Farmers' Bulletin No. 155, "How Insects Affect Health in Rural Districts"—both by Prof. L. O. Howard, the chief bug-man of the Federal Government:

All this means that if we allow the accumulation of filth, we shall have house-flies, and if we do not allow it to accumulate, we shall have no house-flies. The careful collection of garbage and proper protection of slaughter-houses, and particularly horse-stables, would go far toward making the typhoid-fly a rare species. All filth should be carefully screened. The fly-tribe shut off from access to breeding-grounds would rapidly diminish.

In an isolated farm-house the number of house-flies may be greatly reduced by individual work. All horse-manure accumulating in stables or barns should be collected, if not daily, at least once a week, and should be placed in either a pit or vault or in a screened inclosure like a closet at the side or end of the stable. This closet should have an outside door from which its contents can be shoveled, when needed for manuring purposes. Each day's or each week's

[CONCLUDED ON PAGE 5]



The Flies Pass From the Bedroom of the Consumptive to the Food in the Kitchen. Not a Very Choice Idea, is it? Yet It Represents an Actual Condition, a Fact That Must be Faced

Then keep a lookout in the kitchen and dining-room. Ten to one you will discover in the course of a few hours one or several of your garbage-pile acquaintances in the milk or on the butter. This meeting may take away your appetite, but it will be a highly profitable nausea to yourself and family if it leads to the spending of a little money for fly-screens. A member of the army typhoid commission, Dr. V. C. Vaughan, writes: "In some instances where lime had recently been sprinkled over the contents of the latrines, flies with their feet whitened with lime were seen walking over the food" at the mess-tables.

During their cruising about the bodies of flies become covered with the foulest sort of dirt and bacteria of many kinds. The fly's leg is an ideal germ-collector, being equipped with numerous bristles, as are also other portions of his body. A Connecticut agricultural experiment station (the Storrs) took the trouble to count the germs on three selected lots of flies: (1) nineteen cow-stable flies, (2) fifty-four pig-pen flies and (3) ninety-four swill-barrel flies. The numbers were, respectively, 7,980,000, 133,000,000 and 155,000,000. Any disease-causing bacteria collected by the fly are carried along to the next pile of food he circumnavigates and there deposited in whole or in part. Whoever eats the food must reckon with these germs. This is the modus operandi of one form of fly-borne infection. A dirty fly alighting on a cut or other abrasion of the skin or about the eyes may be the agent of a direct transference of infectious material. Or again a filthy fly may so poison the food over which it crawls as to cause a rapid decay and the formation in it of poisonous substances.

The following experiments recently made by a British scientist, Dr. J. T. C. Nash, leave no room for doubt as to the actuality of this latter source of danger:

I caught a single fly in a hospital ward and put it into a small dish of fresh meat-broth. At the end of fifteen hours the broth was converted into a stinking fluid teeming with myriads of germs including large



Flies Breed and Live in Filth



The Same Flies Share Our Meals

What to Do With Your Power

How the Turbine Can be Made Your Man-of-all-Work—By Marshall O. Leighton

IN PRECEDING articles we have described in detail two features in the development of farm water-powers. The first consisted of the observations and measurements necessary to determine whether or not such a power is available and the size thereof. The second was a description of the methods of constructing the ditch and flume, together with the accessory structures. All of these directions, if used with a liberal mixture of common sense, will enable any person to proceed with the construction of a small water-power plant up to the wheel installation.

At that point he must secure special advice and assistance. Every water-power requires special treatment, depending on local conditions. The assistance of an engineer or a millwright must be secured. Even if it were possible to properly instruct through description, the space required for all the manifold details would be too great for practical publication. This being the case, the remainder of this discussion will be devoted to general suggestions, which must be completed as to details by special inquiry on the part of the reader. The editor of this paper will be glad to reply to such inquiries or refer to the proper sources of information.

The turbine, which is the hydraulic motor now used in small powers, is operated by the pressure of the falling water in the same way that a windmill is run by the pressure of the wind. It is composed of three essential parts: First, the runner, or part that revolves; second, the guides, or the stationary portion surrounding the runner through which the water enters to press upon the vanes; third, the draft tube or pipe, which extends from the bottom of the guide case below the runner, down into the tail race. The runner of a turbine is shown in Fig. 2. It is composed of a central shaft on which the vanes are fixed at such angles that, when the water presses against them, the

seven and one half horse-power and will require about eight cubic feet of water per second. The same wheel running under a fall of five feet will develop about three horse-power and will require about five and one half cubic feet of water per second. Similarly a nine-inch turbine under a ten-foot fall will develop about four and one half horse-power and use about five cubic feet of water each second, while under a five-foot fall the same wheel will develop one and one half horse-power and use about three and one half cubic feet of water each second. These figures vary slightly for the various makes of turbines.

The turbine should be set on a foundation built up from solid rock or, if there is none within a reasonable depth, it should be set on piers driven deeply into the ground. A firm foundation is necessary because the turbine is subjected to great and varying pressures. If the wheel should settle, the wheel would be liable to damage or would perform its work inefficiently. All these points and many others will, however, be elucidated by any turbine-manufacturing company on application and it is, therefore, not necessary to dwell upon them further in this series. In purchasing a water-wheel it is a good plan to secure the advice of the manufacturing company. Send a full statement of your conditions and you will receive as good or better advice from the manufacturer than from any one else. This statement would hardly be warranted in the case of a large power, built under special and peculiar conditions, but in the case of a small farm power there is absolutely no danger in following the manufacturer's advice implicitly.

It now remains to consider the uses to which a farm water-power plant can be put. The most convenient way to use water-power is to generate electricity by connecting the turbine shaft by belt with an electric-dynamo and by conducting the current on wires to the places of use. A water-power must be located at a fall in the stream, and the location is not always the most convenient one for utilization on the farm. Unless electric conversion is resorted to, all the machinery operated by the water-power must be placed at the power site. This may be at some distance from the farm buildings and under such conditions the development of the power may not be worth while.

It will generally be the best plan to develop electricity with the water-power. This involves an elementary knowledge of electricity, which can be mastered by any one by reading suitable text-books on the subject. But, as in the case of water-wheel manufacturers above noted, the manufacturers of electrical appliances are ready at all times to give advice and specific directions and to suggest the proper machinery for any given set of conditions. As a general rule, the author does not take stock in trade-catalogue engineering. He must recognize its value, however, and does not hesitate to advocate the dependence thereon in small plants like those here dealt with.

Briefly stated, a dynamo is a machine consisting of two parts: 1, an electromagnet, or group of magnets; and, 2, an

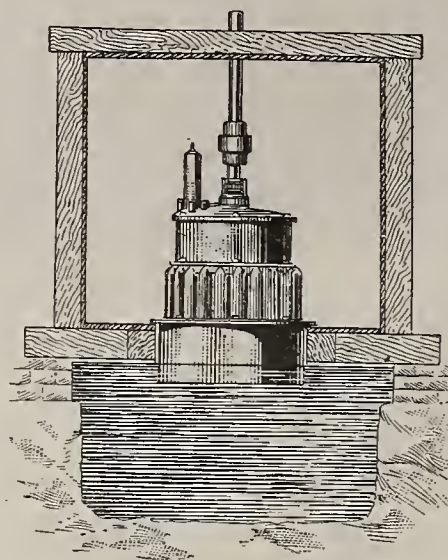


Fig. 1—The Turbine in the Penstock

armature or wheel or rotor wound with wire in such a way that when it is revolved within the field of influence of the magnets, a current of electricity is, by reason of certain fundamental laws, set up in the armature wires and is conducted from it by transmission wires to the place of use. In the small power here described the arrangement of this dynamo with the turbine would be roughly as shown in Fig. 4. The turning of the armature of this dynamo by belt from the turbine results in merely transforming a part of the

energy developed by the falling water into electrical energy that is sent through the switchboard and out on the wire. We now have the power away from the power site and coming along the wire to the farm buildings. What shall we do with it?

Probably the most familiar use of electric power is that for lighting purposes. Once upon a time electric-lights were considered a luxury, but, along with other luxuries, they have now become almost a necessity. They make household burdens lighter. Every housewife will appreciate the change from kerosene-lamps to electric-lights. Her daily tasks are shortened by so much, and she feels a pride of possession that becomes more gratifying as the years go by.

But there is a substantial utility in electric-lights which is important in rural districts where there is no municipal fire protection. Kerosene lamps and lanterns always have an element of danger: especially is this true in the barns and stables where the lighting of matches, and the upsetting of lanterns have been a fruitful cause of fire loss. A fire in farm buildings will set a farmer back to an extent far greater than the cost of an entire electric-lighting system.

It is generally better to provide a storage battery for lighting purposes. Such a battery can be charged from the dynamo during the day when the water-power is in operation and part of the current is being used for other purposes. When the power-plant is shut down at night, the lights will be served by the storage batteries. Such batteries can be secured from any electrical-supply house.

Another use to which the electric current can be put is the pumping of water. There are many reasons why every farmhouse and set of buildings should have an ample supply of domestic water under pressure. More important than all else are the labor-saving and hygienic features of such a system. I place this ahead of the practical value because it is the element of convenience and luxury that is needed in the farmer's life to-day even more than that of practical revenue saving and producing. Of course, the two are mutually dependent, yet many farmers have become so accustomed to exclude all thought of personal convenience, save as it comes incidentally along with the things of practical utility, that it is necessary to emphasize this other phase.

The water should be pumped into an elevated tank, either on the top of the house or in one of the other buildings or on an elevated scaffold, and the usual connections should be made from the tank to the plumbing features of the house,

the watering-troughs, etc. In addition to being a convenience, such a system is useful in extinguishing incipient fires. This protection alone is worth the cost. It is true that in extreme northern parts of the United States such a system cannot be used in the winter unless the house is warm throughout or unless the pipes are properly protected. But even if the system must be suspended in the winter, its usefulness during the remainder of the year will amply repay the outlay.

A power pump is familiar to every farmer. It requires only to be belted to a motor which can be fixed at a convenient point where, if ingenuity be used, it can serve not only the pump, but other machinery that will be described below. A motor is similar to a dynamo, already described. It receives the current from the wire and converts it into mechanical energy, the difference being that whereas the dynamo receives mechanical energy and turns out electric energy, the motor serves the opposite purpose. Motors suitable for such purposes can be obtained at relatively small cost from electrical-supply houses which will guarantee their efficiency and furnish the necessary directions for the setting up and maintenance.

The same motor that is used for pumping can, by proper arrangements with shafts and pulleys extending to suitable places, be made to operate all kinds of stationary farm machinery, such as threshing-machines, grist-mills, wood-saws and choppers, feed-cutters, churns and grindstones. In the case of some of these, like the thresher, the wood-cutter and the grist-mill, work can be performed for other farmers not supplied with these appliances and a revenue secured, which, within a reasonably short period, will pay for the cost of the appliances.

The space available for these articles is not sufficient to enable the author to enter

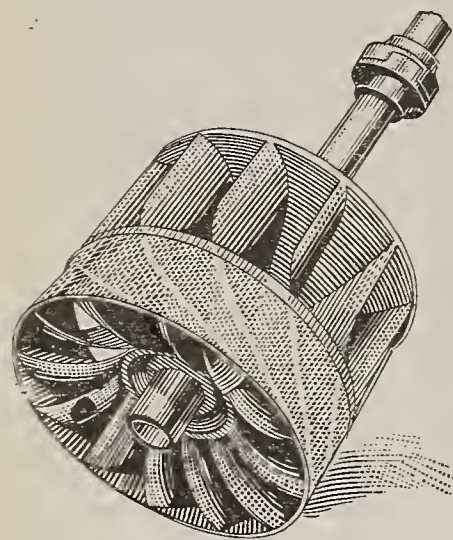


Fig. 2—Runner of a Turbine

whole runner revolves and the power is transmitted by the shaft to the outside machinery. The iron band around the bottom of the runner, shown in Fig. 2, is made to appear transparent so that the reader may see how that portion is made. This runner is set in a box or guide case like that in Fig. 3. The shaft on the runner shown in Fig. 2 may be seen protruding from the top, or bonnet, of the case. The shutters, or gates, below the top rim of the case let the water into the runner in the direction best suited to act on the vanes. The draft tube is the cylindrical portion below the gates.

This runner and case are, in small powers, usually inclosed in a wooden box or penstock as shown in Fig. 1. The water from the flume above leads directly into this penstock under pressure and, as the penstock is full of water and under equal pressure, the water is forced through the gates, or shutters, of the turbine case and so actuates the runner. Notice in Fig. 1 the draft tube through which the water, after passing through the runner, discharges into the tail pit. Note further that the tail pit is large—much larger than the turbine. This is an important point to remember.

Turbines of this type range in size from a runner diameter of nine inches up to seventy-two inches. Those for ordinary farm use are from nine to twelve inches in diameter, although larger ones may serve some farm purposes better. A twelve-inch wheel running under a ten-foot fall of water will produce about

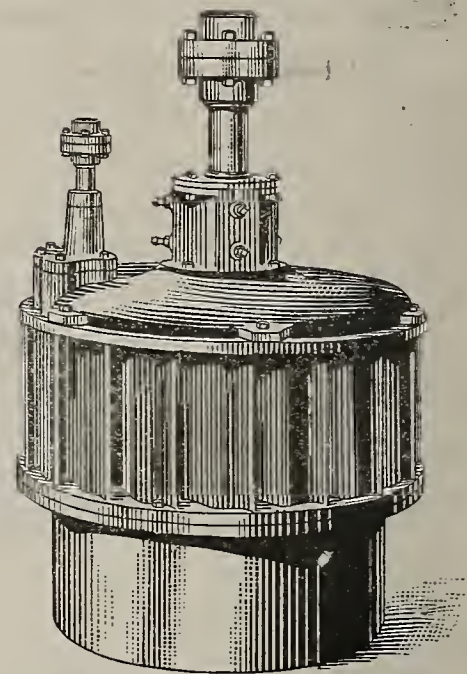


Fig. 3—Guide Case of a Turbine

upon a more detailed description of the uses of a water-power on the farm. It has been possible merely to suggest in some cases in a superficial way what may be accomplished. We have in the foregoing assumed that the electric power is the most adaptable for all purposes. It will, however, be appreciated that if the water-power be located at a convenient point, and the electrical apparatus be for one or another reason impossible to secure, the energy can be secured direct by belting from the shaft of the turbine to the machinery if it be located close by. In such a case there cannot, of course, be any electric lighting. There is no general rule that may be followed in determining the most preferable procedure in this matter. Each set of conditions is different from every other and it is expected that the farmer will use his native common sense in adapting the water-power to his needs.

If a water-power serves no other utility than that of supplying conveniences about the farm buildings and enabling the farmer and his family to perform their daily labor without resorting to so large and constant an amount of manual labor, the development will be justified. The effect will be to increase the attractiveness of farm life and give a broader and better outlook so that the conditions recited at the beginning of these articles—namely, the disappearance of the native American from the farm—will in large measure be prevented.

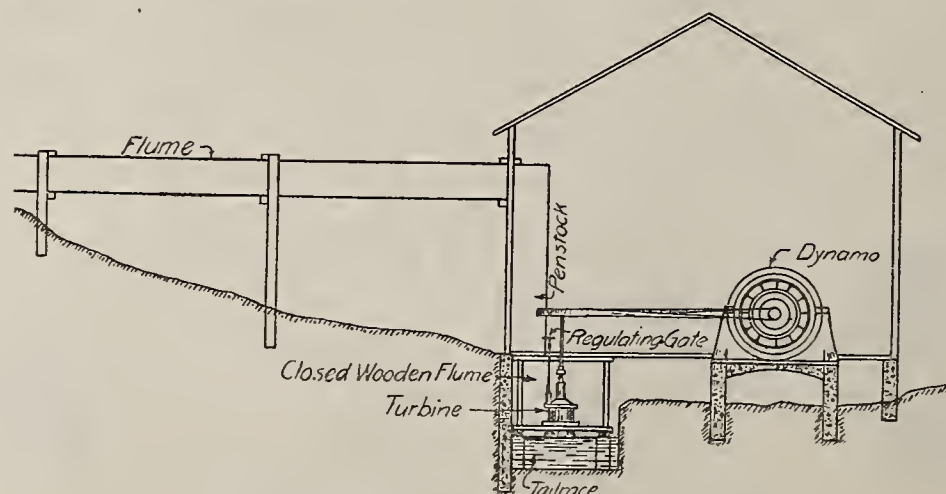


Fig. 4—The Equipment of a Farm Power-House

Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks

The Stop That Suits

I NEVER had any satisfaction with my work-bench stop until I invented this: Taking a three-inch square piece of hard wood (A) longer than the height of the bench, I dressed down about six inches of one end to a size to work easily in the hole (B) already mortised in the bench for the stop. Directly beneath I cut a hole in the floor three and one eighth inches square for the other end of the stick to work up or down through, boring numerous holes with a three-eighths inch bit in slanting rows, starting first row at floor-line when the upper end of stop was just level with top of bench.

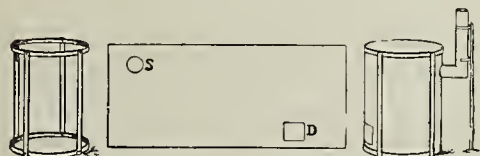
Using an iron pin through these to regulate the height, the stop can be adjusted and remain perfectly rigid to suit any work on the bench, with no danger of dulling your plane as one can do on an iron stop.

PAUL R. STRAIN.

Good Way to Fasten Netting

WHEN putting up wire netting for the poultry-runs or in any place where you do not expect to leave it until it rusts out, drive a sixpenny wire nail half its length into the posts just under the top strand and just above the bottom strand and every foot or so, or as often as you think necessary, up and down the posts, and bend these nails alternately down and up over the adjacent strands. The fence will be held just as firmly as if fastened with staples, and if you ever want to take down the netting, all you have to do is bend back the nails. When netting is put on with staples driven firmly, it is not only a long job to take down the fence, but almost impossible to do so without damaging the netting.

A. E. VANDERVORL.

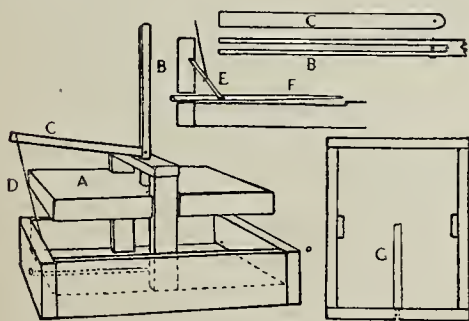


A Cheap Feed-Cooker

WITH the cooker here described I cooked feed for forty hogs last winter. From some old buggy tires I made two hoops the size of an iron kettle I had, and connected these hoops by four straight upright pieces of tire about two feet long, punching holes in the uprights and hoops, and fastening them together with short bolts to form the substantial frame shown at the left of the diagram. I got from the hardware-store a sheet of common stove-pipe iron, large enough to go around the frame, and cut a hole (S) near one corner of the sheet large enough to slip a six-inch stove-pipe elbow into, and near the other edge a hole (D) ten inches square for a door. The sheet iron was then bent around inside the frame and the elbow put in, slitting elbow and turning it back inside to hold it in place. I supported the stove-pipe by a long iron rod driven into the ground. A piece of sheet iron was placed over the door opening and slipped behind two of the standards to hold it in place. Each night I put the next morning's chopped feed into the kettle, with a couple of pails of water, set the kettle into the top of the cooker, covered the kettle with boards and started the fire. With the door closed and the damper in the pipe turned, the fire keeps all night. In the morning I tempered the hot feed with milk and water for the pigs and chickens. Their night feed was similarly prepared, and the gains they made were surprising.

The cooker, aside from kettle, cost fifty-eight cents.

W. S. BAIR.



A Home-Made Rat-Trap

MAKE a stout box twelve by fifteen inches by about two inches deep, inside measurements. Nail firmly in this two uprights nine inches high. For the "fall" use heavy two-inch oak plank (A), twelve by fifteen or a bit smaller, with square notches cut out so it can slide up and down on the uprights. Fit this in; then nail on a crosspiece between uprights.

Clamp in a vise a round one-inch stick (B); fourteen inches long (a soft-wood broom-stick is good) and saw in it two parallel cuts ten inches long, taking out a tongue (C) a quarter of an inch thick. Round the end of C, replace it in the slot in B, and drive a nail through, so that C swings easily on it. (At top of drawing B

A Double Invitation

IF you have a way of your own of doing or making something around the farm that you think is better than common, why don't you write us about it? Send along a rough sketch if one is necessary to make the idea clearer. For every Headwork idea we publish we will pay our regular rates and, for the three best, five dollars each.

We ask our subscribers to act as jury and choose the champion three by post-card vote. Votes came in finely last month. Won't you send us yours this time? Every subscriber to FARM AND FIRESIDE has the privilege of voting—or any member of the subscriber's family can send in the vote, if the name and address of the one that takes the paper are given. Votes are counted two weeks after date of issue.

We believe every idea on this page is good enough to deserve your consideration and that you will pick out two or three in particular that fit exactly into some of your long-felt wants. Support your choice with your vote! Just write the names of the three Headwork articles you like best, this issue, on a postal, and mail it to the Headwork Shop, FARM AND FIRESIDE, Springfield, Ohio.

EDITOR.

is shown with piece sawed out, and the piece C is shown from the side.)

Bore a hole at center of crosspiece so that B will slip through easily. Bore another hole in center of fall (A) and fasten B firmly therein.

Bore hole through middle of end of box at level of bottom board. Continue the line of this hole by groove (G) along bottom—its position is shown in oblong at right of drawing, below, which represents box seen from above. Put through hole a thin tapering stick (F). This lies in groove and is kept from slipping clear in by nail driven through it outside the box.

Notches are cut in F and the end of the box. The catch (E), a short piece with flattened ends, is placed in these. When E is in place F tilts up out of the groove a little (shown in small diagram above).

Raise A until the tongue C can be brought down as shown. It is held there by string D to catch E. Scatter corn-meal in the box or put cheese on F. The rat climbs into the box and touches F, which releases E. The tongue C flies up into the groove in B, and B slips down through the hole in the crosspiece, dropping A. One less rat.

W. W. SHAY.



A Hog-Catcher

IN YOUR paper of April 10th I noticed a plan for holding hogs, by roping them around the snout and backing them into a corner. That is humane, but it would be hard to apply on a vicious hog. Here is something hogs can't dodge: Take a half or three-quarter inch gas-pipe about four feet long. Bore a hole (A) near one end and fasten in this a flexible strong wire like clothes-line wire. Pass the other end of the wire through the pipe and fasten to a hand-hold, leaving a loop. Slip this over the hog's nose or upper jaw. By bracing the hand-hold into a wagon-wheel or fence the hog, pulling back on the other end of the wire, can be held so one man can ring him.

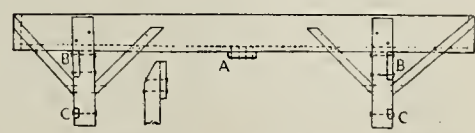
E. E. LOUCK.

For Three-Horse Teams

HERE is a way to drive three horses abreast. AA represents bridle bits of outside horses, B is bit of middle horse. Put check-lines (FF) on outside horses, letting the inside checks of each run to middle horse's bridle. Put hitching reins (DD) from hame-rings of middle horse (CC) to inside bit-rings of the outside horses. I have used this and it is all right. M. H. G.

WE FIND a "supply-board" handy. This is made of clean soft wood, measures about three by four and one half feet, and is fastened flat to the wall. Hooks and nails are driven into it in rows. On the top row hang different sizes of hinges, both the strap and screen-door varieties. On rows below are harness and rope snaps, screw-eyes, extra cock-eyes for harness tugs, rings for wagon tongue and reach, window-catches, door-hooks, staples, etc. There is a place for almost everything, everything is in its place and that place is in sight.

R. E. ROGERS.



A Feed-Box Built to Last

HERE are the specifications of the best feed-box I have ever used: Three pieces of two-by-twelve, twelve feet long, for the bottom; two pieces of two-by-ten, twelve feet long, for sides, and another to make end pieces from; one piece of four-by-six, twelve feet long, for legs; three pieces of two-by-four, twelve feet long, for braces, and

for the lower ties (CC) between bottoms of legs; one piece of two-by-eight, twelve feet long, for cross-ties under bottom (A and BB).

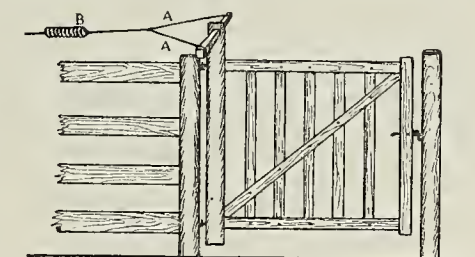
The legs should set two feet in from ends of box, turned with the six-inch side against the box. A two-inch mortise is cut out of the legs, into which the cross-ties (BB) are bolted. The tops of the legs are sloped into a width of an inch and a half, the slope beginning six inches from the top, as diagrammed (below box).

The slanting braces should come flush with ends of box and be nailed to end pieces to hold them firm. Holes should be bored, in braces especially, before driving heavy nails, to avoid splitting. The tie (A) should be well spiked into both bottom and sides to hold them firmly together.

You will need sixteen half-inch bolts six and one half inches long, with four four-inch bolts for tops of posts, two pounds of thirty-penny spikes for foot of braces and four pounds of twenty-penny spikes for other places.

This feed-box is free from obstructions for hogs, is extra strong and will set on almost any ground. The heights of boxes I have found best have been thirty-one inches for yearling steers, thirty-two for two-year-olds and thirty-three for older animals.

JOHN C. MAXWELL.



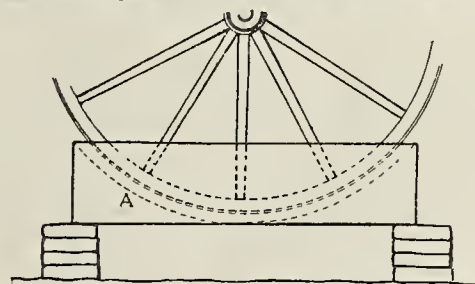
A Self-Closing Gate

THIS plan, I think, beats all other plans for self-closing gates. The upright piece at the hinge end of the gate is made higher than the post it swings on. A crossbar (A) is fixed to this upright near the top, by putting it through a hole (at right angles to the gate) or otherwise fastening it strongly. Make the crossbar two feet long or over—you can cut it down if it is too long.

From the ends of the crossbar run two strong wires or, better, chains, joined together about two feet from the crossbar and continue by a single wire. To this attach a strong coil spring (B) from some old binder or mower. Run a further wire from the other end of the spring to the second post of the fence.

This gate will swing either way and be pulled shut again. If opened clear back, it will stay open.

E. H. HAZEL.



To Anoint Wheels

MANY vehicle-owners run wheels without attention until the rims begin working loose and the ends of the spokes have so worn the tenons as to rattle and let in water in muddy driving. To avoid this and keep wheels in shape, a fine plan is to boil the rims in linseed-oil at least once a year. Use a narrow galvanized iron tank, as diagrammed, long enough to take in your largest wheel. A good tinner can make one with a bottom curved as indicated by the dotted line A, in which a very little oil will cover the rim, which is all that is necessary. Bring to a boil slowly, to avoid the oil taking fire. Clean and dry the wheel and turn the rim very slowly through the oil. When it is well soaked, set it aside a day or two, then wipe dry and paint. The job is worth the trouble.

F. W. T.



A Handy Wheeled Sled

THE accompanying illustration shows a side view of my sled with wheels under it. It is used for many purposes, such as hauling harrows, plows, etc., to and from the fields; manure from the stables, and other heavy jobs. The wheels are about a foot in diameter and are solid two-inch plank with iron tires. They are fastened to the axle which is a piece of hard wood three inches by three inches. The axle revolves in wooden boxes fastened to each runner. It will be seen at once how the draft is reduced by the aid of the wheels. When the horse pulls, the front is lifted and the main weight rests on the wheels, while going down-hill the weight is more to the front and, bearing on the runners, keeps the sled from running onto the horse's legs.

C. R. BASHORE.

A Paint That Stays

AN OLD boatman and fisherman gives the following recipe for a water-proof and indestructible roof paint. Take three parts of coal-tar and one part of linseed-oil. The tar is burned or pitched, and while yet hot the oil is added boiling hot. It is to be thoroughly mixed and cooked for one hour. Apply while hot.

M. G. RAMBO.

Prize Winners in the Headwork Shop for June 25th will be announced in our next issue.

The Murdering Insects

[CONTINUED FROM PAGE 3]

accumulations, after they are shoveled into the closet or pit, should be sprinkled over the surface with chlorid of lime. If this plan is adopted (and these recommendations are the result of practical experience), house-flies will have almost no chance to breed, and their numbers will be so greatly reduced that they will be hardly noticeable. It has been already stated that the closet for the reception of manure should be made tight to prevent the entrance or exit of flies. A window fitted with a wire screen is not desirable, since the corroding chlorid fumes will ruin a wire screen in a few days.

There are two general methods by which insects serve as transfer agents for disease germs: (1) As mere mechanical carriers (of which the above discussion of the typhoid-fly is an illustration), and (2) where the disease-producing organism is actually taken into the body of the insect (from a malaria patient, for instance) remains there for some days undergoing certain peculiar changes of form and is then transferred by a bite or puncture to the blood of another person. This is the modus operandi of the spread of malaria and yellow fever by mosquitos. Every one knows about the mosquito's rôle in these diseases. In temperate regions there is, as a rule, little to fear from either—little, at least, compared to the danger run by dwellers in the tropics. In all regions both may be avoided, by avoiding the bites of mosquitos—another argument for screens.

Other notorious bugs that play havoc with human and animal health are the tsetse fly of South Africa and the so-called cattle-tick which transmits the Texas, or spotted, fever of our Western regions. Fleas are certainly responsible for some cases of bubonic plague, perhaps all of them, and also play a part in the spread of many other human and animal diseases. That horror of the housewife, the bed-bug, is also under suspicion, and there is too much reason for believing that he plays a lowly part through the vagrants' great line of parasitic clearing houses, the cheap lodging establishments, in the spread of hobo maladies. Other human and animal parasites, the crabs and lice, may help along the great work of infection.

Indeed the man of ordinary common sense must, in the light of modern research on insect-borne disease, take considerable trouble to avoid being bitten or punctured or even crawled on by any insect whatever, from *Musca* down. The farmer, perhaps, is not so much exposed to most of these insect-borne dangers as the city man (although both typhoid and malaria are generally considered country diseases), but he cannot wholly avoid them. For the "typhoid-fly," unquestionably the worst and most dangerous of the lot, his barn-yard and outhouses are fertile sources of production. He knows all about the crop-bugs and how to fight them, but too often he wholly neglects those that prey on his own body and food.

And yet if you put it to him clearly, he must admit that it is far better to let the potato-bug eat up his potato crop or the codling-moth destroy his fruit than to permit the manure-bred house-fly to infect his family with typhoid fever or tuberculosis. Admitting this, he will carefully protect all piles of manure, garbage and other refuse from flies, and, to make assurance doubly sure, also screen his kitchen and dining-room, at least. Screens are not luxuries nowadays, but necessities.

Gardening---By T. Greiner

Rhubarb Easy to Force

A PENNSYLVANIA reader inquires about growing rhubarb during the winter for market. To get the plants, however, seems to be the main trouble; so he proposes to raise them from seed. But this would require an additional year's time. The plants also do not come true from seed. They vary. They have to be culled severely. By carefully selecting best plants, I have obtained very fine rhubarb, but it is better and quicker to purchase roots and set them somewhat more closely than we plant rhubarb for market. They might be set two feet apart, or even less, in the row.

It would be well to look up a supply now among market-gardeners in your neighborhood. Patches have to be taken up now and then and new plantations made. I will have to do that this fall. In that case the roots have to be divided, and one clump will give half a dozen or more sets. Consequently, a whole lot of clumps will be left over, for which the grower may have no particular use. If you can obtain such roots, or clumps, four or more years old, you will find in them the right material for forcing rhubarb next winter. When you have the chance, come to some bargain with a rhubarb-grower for a quantity of old roots.

They must be taken up before severe freezing and may be stored in some shed or other safe place to freeze. They can be used up gradually, as the stalks may be wanted. No light is needed in the room where they are forced, but it should have a moderate temperature, say from forty to sixty degrees Fahrenheit. People who use a cellar bottom for this purpose sometimes board the bed up and place a lighted lantern near the plants to provide heat. Just set the clumps of roots closely together on a damp cellar bottom and fill in among and over them with good garden loam. In a few weeks' time you will get nice, tender stalks, but not much more than a mere suggestion of leaf.

Saving Garden-Seeds

Good seeds do not absolutely insure a good crop, but they are a "*conditio sine qua non*," an indispensable requisite and the real key to success. What seeds we raise, we know. What we buy, we must take on trust. Even if true that the respectable American seed-houses can be trusted to furnish as good seeds as they can find or procure, they in many in-

stances have to trust somebody else's word for it that the seeds are good.

But quite often we have some vegetable variety or strain that we think is better or more promising than any of the average run in the market. To be sure of having seeds of it to plant another year, we must save our own supply.

And why should we not? It is easy. But we must make our preparations early. As we go along during the summer, we should keep an eye open and note the best tomato-plant in the patch—the one that gives the earliest and smoothest tomatoes, those of best quality, etc., and save specimens of it for seed. If particularly valuable, we may have to go further and take up the plant with plenty of soil adhering to the roots or a branch of it and set it in a spot by itself so as to keep the seed of the specimens that set afterward pure and free from cross-fertilization.

We should also mark the Lima bean plant that gives the best and most pods by tying a string or rag to it, or in other ways, and save the earlier pods for seed. We can easily save our own melon and squash and pumpkin seeds, sweet corn and others.

For the general run of garden-seeds, however, we still rely on the regular seedsman. I do not think it would pay us to grow our own seed of carrot, beet, celery, radish, lettuce, spinach, etc. I strongly advise those who plant quantities of garden-peas to grow or save seeds of their own, for reasons of saving the high cost of seed-peas. Altogether, it is a somewhat complicated question.

To Clean Vegetable-Seeds

A Virginia reader is in doubt as to the time or stage of ripening in which it is best to gather the specimens of vegetables selected for seed.

My way is to let tomatoes, peppers, egg plants, cucumbers, melons, pumpkins, squashes, etc., come to full maturity on the vine or plant, then to take the seeds out before decay sets in. In case of tomatoes, cucumbers and perhaps a few others it will be necessary to let the pulp or juice containing the seeds stand in a warm place for a few days to ferment so the pulp which envelops each individual seed will separate from it. Then the seeds are cleaned by washing, the pulp being floated off the top while the seeds sink. Then dry the seeds in the sun, and usually they will be bright and clean.

Years ago, the late Professor Goff, a

shining light in horticulture, discovered that by using seeds of green or half-ripe tomatoes for seed he could get slightly earlier tomatoes than by taking seed of fully-ripe specimens. I do not think that the discovery has had much practical consequence, however.

Why Spray Potatoes?

The potato-beetle this year has changed into a variety and exception where it used to be present by hundreds and thousands. It is only now and then that I find a beetle or a few slugs or egg-clusters on the leaves. It is good riddance, but there is danger that we get overconfident and careless. If we omit the spray and neglect to kill the few beetles that are left, they will soon multiply again until they are numerous as the sand on the seashore. Continue the fight to the bitter end, and the victory will be ours. "Why spray potatoes when beetles are not in evidence and not destructive?" you ask. Because we don't want to have them in evidence and destructive later on and next year.

That Asparagus-Bed

Now keep the weeds out of your asparagus-bed if you have one. If you haven't, rest easy until early spring, then make one.

A reader's idea is to make a bed twelve feet square. We used to raise asparagus in that way, setting plants in blocks, twelve inches apart each way. This crowds them, and crowding makes cripples and dwarfs. Now we give the plants plenty of room, say two feet apart in the rows and the rows five feet apart. The plants are more easily taken care of, kept clean and fed. Never let the weeds get full possession, for he who hesitates (killing weeds) is lost.

Chickweed Submits to Sprays

The twenty-per-cent. solution of iron sulphate, or common green copperas, sprayed freely over the ground in hot weather has within five days completely routed the chickweed which bothered me greatly among onions and other stuff. But it has somewhat scorched the onion-leaves, celery, beets, lettuce, etc., and I hardly think the application is safe and practical as a weed-killer in the garden. It may do in grain-fields or meadows. Before using it largely in garden patches, I will have to know more about it.

Citron—Tree Fruit or Vegetable?

A Virginia reader wonders what the commercial preserve sold as "citron" really is, a product of the vegetable garden or a tree fruit. The citron of commerce is the product of a tree or shrub of the citrus family, a near relative of the lemon, orange and pomelo. The fruit has a thick rind and but little pulp. The rind is prepared with sugar and dried.

The "citron" of our gardens, however, is really a watermelon, of hard and firm flesh, and is used to some extent for a similar purpose as the Southern citron of commerce. A generation ago we always tried to have a hill or two of this watermelon in the garden and to put up a few cans of "citron preserves," sweet and well spiced. They are easily grown, even in the North, as they do not require so much time to come to full development. Give them the same treatment as common watermelons.

Rose-Chafer Can be Controlled

New Jersey gardeners report much trouble from rose-chafer depredations. Roses and grapes often suffer severely. I have had my experience with this fellow in that state. Here in western New York we know nothing of it.

With arsenate of lead you have the drop on the rose-bug. Professor Taft, of Michigan, finds that spraying with three to five pounds of arsenate of lead in fifty gallons of water, to which a quart of cheap molasses has been added, will destroy the chafer. If the application is made when the beetles appear in numbers, they will even leave the leaves and feed on the poisoned water. Get rid of them!

Now We Sow Turnip-Seed

Seed of the flat or strap-leaf varieties of turnips is cheap and a little goes a good way. This vegetable grows quickly, too. If I kept sheep, I would never let a corn-field remain bare between the rows. A little turnip-seed scattered over the land after the last cultivation will soon cover the ground with green growth and in late fall give you a lot of pasture and good roots, too.

For my cows I prefer to grow mangels and carrots. But the turnips come handy, anyway. We can sell them; we can use some for poultry, a few, of course, for the table. So I sow a few ounces of turnip-seed in my corn-patches, anyway.

This and That Around the Farm

Pledge the Candidates

ANOTHER session of Congress has come to a close and nothing looking towards a parcels post has been brought forward. Just recently a parcels post between this country and Brazil was established, and now we can send a twelve-pound package to a friend in Brazil for about half what it costs to send a four-pound package from one post-office in this country to another a few miles off.

But we are progressing. Last fall the department raised the fee for registering letters from eight to ten cents. A determined effort was made to double the rate for carrying periodicals through the mails, but the great protest that was raised against it snuffed it out.

If the department were run as any successful business is run, we would not only have a parcels post equal to that of any country on the globe, but there would be substantial reductions in postage rates instead of increases, like the registry fee. A sample of the peculiar policy of the department is shown in its payment of fifty thousand dollars a year for carrying the mail across the bridge at St. Louis. What other government would pay such a sum for such a service?

A man in Oregon asks me to just tell him briefly why Congress will not give this country a parcels post. Simply because the people of this country send to Congress only such men as the express companies can control. Next fall we elect a new Congress. The candidates are already putting themselves "in the hands of their friends." Do you know them? You read and hear of them as Democrats and Republicans or the special representatives of certain interests, but do you have any idea how they stand in regard to the best interests of the plain people? I'll bet my hat you don't. And you will vote for them because they are on your brand of ticket. And when

they get there the express companies will control them, and parcels post will be no nearer than it is now. When you demand, before election, that the candidate shall serve your interests instead of those of monopolies and trusts, and you get his pledge to do this, you will stand some chance of getting what every other civilized country already has.

The thing for all of us to do is to shake ourselves free of party chains. We must get into the independent class before we will be able to accomplish anything. Once shake off the shackles of party and you can examine all questions in the clear light of independent intelligence and vote accordingly.

FRED GRUNDY.

More Points in Onion-Raising

A FEW issues ago Mr. R. E. Rogers, referring to my previous article on "How Many Onions," asked why I mark out my onion-ground with a horse. He thinks it would leave holes to waste seed. I use two horses and the marker of ten rows and float combined, well weighted, which gives a firm and smooth seed-bed. It drills easier and seed germinates better. On the other hand, if you mark with one row at a time when drilling, it is hard pushing through soft ground out here in Kansas.

As regards the quantity of seed per acre, if I sowed five pounds I would expect a crop of sets, as I seldom, if ever, thin out onions. The weeding makes enough to do.

A word further on burning straw on the onion-land before plowing. While as a general rule I do not believe in burning wheat or corn stubble, still old hay, straw and such rubbish is plenty here and I find it pays to burn it to destroy weed-seed, cut-worms, wire-worms and other onion pests. It also leaves a good amount of potash in the ashes. E. E. ALLEN.

The Blood in a Turnip

A GOOD deal has been said first and last about the turnip being a cold-blooded thing, scarcely fit to be mentioned in connection with other farm and garden vegetables. How it ever came to be so is a mystery to me, for surely the good old-fashioned turnip has a great deal to recommend it.

A young farmer I know of last season sold forty dollars' worth of turnips from a little patch scarcely bigger than a good-sized kitchen garden. The one thing that helped most was the fact that those turnips were all washed as clean as water and scrubbing could make them before they were offered for sale. They looked so nice and white when in the store that people who came in could not help wanting some of them. When the farmer's wife told me she washed those turnips herself, I felt like congratulating them both; the young man that he has a wife who is always ready to help wherever she can, and the wife that has such an eye to business and is on hand, even when it comes to washing three or four bushels of turnips by hand at one time. Those turnips sold readily at half a dollar a bushel and they were worth it.

There is profit in turnips, both early and late, so the plants may be set out any time from the latter part of March to the end of August. The soil ought to be fairly rich and easy to cultivate. A loose, free soil is best. Scarcely any after cultivation is necessary save such as is needed to keep the weeds down. On the farm a good quality of barn-yard manure is usually sufficient to bring a good crop, although turnips respond finely to commercial fertilizer. It is not well to have the plants too thick together, from eight to ten inches being a desirable distance.

But does anybody throw it up against the turnip that it is good for nothing after we do get it? He who says that ought to

go through a course of sprouts at the hands of a doctor and get his stomach righted up, for he certainly does not know what is good to eat and what is not. I know turnips are largely water, but we have to have a lot of it every day, and is there any more pleasant way to take it than in the form of nice vegetables like the turnip? But there is also plenty of nourishment in the turnip.

Over in Great Britain it was a great day when the turnip was introduced. That humble plant has worked a revolution in the history of agriculture there, making possible a rotation of crops that has been of untold help and furnishing a winter supply of succulent food for sheep and cattle. Let's do better by the turnip and it will do better by us. E. L. VINCENT.

A Few Fertilizer Facts

We are not using enough sulphate of ammonia on our sandy soils.

Muriate of potash is usually the cheapest source of potash.

For pushing summer garden crops, try a mixture of three pounds of cotton-seed meal and one of the nitrate of soda.

Phosphoric acid tends to increase fruitfulness, but a liberal supply of potash is of almost equal importance.

It pays to use the relatively high-priced fertilizers, such as Peruvian guano and bones, for they are worth more than their indicated unit values.

"The best method of feeding any special crop," says the "Mark Lane Express," "is to apply a moderate dressing of farm-yard manure and then use a dressing the crop needs of such commercial fertilizers as contain nitrogen, phosphate of lime and potash." J. W. JR.

Fruit-Growing—By Samuel B. Green

Peach-Leaf Curl

FROM an Ohio subscriber comes a specimen of peach-leaf, curled, crinkled and swollen in a peculiar way. It has been injured by the fungous disease commonly known as "leaf curl." This disease is only too common in all the peach-growing districts of the world.

It is most serious in the United States in the Great Lakes states and the Pacific Coast region, but is troublesome wherever the peach is grown. It is more or less epidemic, appearing occasionally with great severity and quite regularly every four or five years. It was estimated by Professor Pierce that the annual loss from peach curl in the United States could not be less than three million dollars.

Its chief injury to the tree is that a severe attack of the disease may greatly reduce or entirely prevent the setting of fruit buds for the following season. Moreover, the late growth of the shoots, induced by the attempt of the tree to replace the leaves lost by the disease early in the season, often results in the failure of the wood to mature and consequently in winter injury. The loss of leaves may be so severe as to cause the dropping of the fruit which has already set. In other cases, the trees may be able to pull through the attack with sufficient healthy foliage to hold a part or all of the fruit. The effect of the disease upon the fruit crop seems to depend upon the condition of the tree as determined by its vigor and location, and the character of the succeeding winter.

Some varieties of peaches are affected more severely than others. The Elberta, for example, is liable to suffer more or less every season, unless properly sprayed. Other varieties are so little affected that they are regarded by growers as being immune. Among these are the Early Crawford, Late Crawford and the Crosby; but no variety is universally immune.

It is not known just how the parasite enters the leaves and shoots. It is certain, however, that entrance is effected very early in the spring. This is proven by the fact that spraying with Bordeaux mixture before the buds swell will prevent the disease, while if the application is made after the tips of the leaves show, the disease is seldom well controlled. It seems probable that the spores of the disease are carried through the winter on or between the bud scales, and when the buds swell a good deal of the leaves between is exposed, and if rains come at this time, the spores start and infect the leaves. Experiments show that spraying any time within a month previous to the swelling of the buds is effective.

In spraying, it is important to wet the twigs on all sides with Bordeaux mixture. It was formerly thought necessary to use Bordeaux mixture double strength, but New York experiments show that ordinary Bordeaux is satisfactory. Lime-sulphur solution applied in the spring has also been found a satisfactory remedy. Spraying with a copper-sulphate solution, one pound of sulphate of copper to fifty gallons of water, is also effective.

Lime-Sulphur Summer Spray

An Iowa correspondent asks about the present standing of lime-sulphur wash as a summer spray for apple-trees in summer. Circular No. 54, of the Bureau of Plant Industry, United States Department of Agriculture, says this:

"A lime-sulphur solution containing, when diluted, about four pounds of sulphur to fifty gallons of water appears at present to be the most promising preparation. This may be obtained by using the commercial solution at the rate of one and one half gallons to fifty gallons of water or by preparing the lime-sulphur solution at home and diluting it so that each fifty gallons will contain four pounds of sulphur. A strength of one and one fourth gallons of the commercial solution to fifty gallons of water may prove to be sufficient in most cases, and the danger of injury would then, perhaps, be entirely eliminated."

Elsewhere in this bulletin it was stated that in one instance a strength made as first indicated above proved injurious to the foliage after the third application, the injury being greater with each additional application. The eight-eight lime-sulphur mixture, which our correspondent mentions, would probably be very injurious.

In the experiments carried on lime-sulphur was apparently as effective as Bordeaux mixture in the control of apple scab; it also controlled leaf spot and other minor troubles; but it had not proved to be a satisfactory remedy for apple blotch and bitter rot, two diseases against which

Bordeaux mixture is effective. It is plain that the summer use of lime-sulphur wash is still in the experimental stage.

For making the lime-sulphur wash at home, present knowledge indicates about the best proportions to be: Four pounds of powdered sulphur, two pounds of very highest grade stone lime (more if not highest grade) and two gallons of water. Slake the lime, pour the sulphur over the lime while slaking and then boil for one hour. When boiled, add enough water to make the fifty gallons. Better results are obtained when larger quantities than above are made in one batch.

To prepare this same mixture for painting the trunks of trees, where it will not come in contact with the leaves or while the tree is dormant, you should add enough water to the above quantity of lime and sulphur after boiling to make about fifteen gallons instead of fifty. The usefulness of the lime-sulphur wash as a protection against mice and rabbits and in other ways on the tree-trunk is in the experimental stage and I should prefer to use other well-known methods of protection until this method had been thoroughly tested.

Gall on Raspberry Roots

J. A. P., Michigan, states that the roots of his raspberry-plants have knots or lumps growing on them varying from the size of a bean to as large as four or five inches through and that the vines grow and blossom, but when the berries begin to ripen, the vine dies from the top and the berries dry up.

I think this is a form of what is known as "root-gall." There is no satisfactory remedy. The best treatment is to destroy the vines and, in planting again, to avoid land on which the diseased plants have been grown, and select new stock that is free from disease. A great many nurseries in the Northern states are having trouble with this disease, which attacks not only raspberries, but many of our larger fruits. On some of them it does serious injury, on others it seems to injure the plant little. Some time ago this disease was pronounced uninjurious to the apple, pear, quince and even to raspberries. I know of one case where the grower felt he must destroy his raspberry-plantation on account of this disease. A friend persuaded him to give it further trial and he succeeded in getting several good crops. This is, however, so very exceptional that I cannot hold it out as a hopeful proposition for you.

Sometimes this disease is combined with what is known as "leaf curl" of the raspberry. Its symptoms are a curling of the leaves and stunting of the plant, and the berries that ripen are small and bitter. There is no known remedy for it and the plants should be destroyed.

Something over twenty-five years ago the Hudson River red Antwerp raspberry was grown along the Hudson River and it was perhaps the best red raspberry that has ever been grown for market in this country. The plants were tender and had to be laid on the ground each winter, but the canes were flexible and this could be easily done. It finally yielded to the disease I have described as curly leaf. Its successor was the Marlborough, which has also proven very profitable, but now is succumbing to the same disease. What we need to-day are other varieties with the pristine vigor of these sorts and I believe that some one is going to originate varieties of this kind.

This Tree Not Much Use

G. W. B., Indiana, states that he has in his wood-lot some trees which appeared twenty-five or thirty years ago and which look like the catalpa, except that the seed-bolls are round like a cotton-boll, instead of long. He says further that this tree has been identified as Paulownia tomentosa. This is a Japanese tree, of very much the same habit of the catalpa and it was originally classed with it. It is now classed as a distinct genus of Scrophulariaceae. The flowers are nearly two inches long, of purplish-violet color. When first introduced, its rapid growth, large leaves and the exaggerated accounts of the beauty of its flowers caused it to be much planted; but the somewhat hoary tint of the down which covers the leaves renders the green too dull in color. The flowers, moreover, come out too early to succeed well in our climate and their color is far from brilliant. It is altogether inferior to the catalpa. I have been unable to find anything satisfactory in regard to the wood of this species, except that it is soft and easily worked, like the catalpa.

I do not know of any common name for this plant.

Watering Strawberries

A Minnesota reader wants to know the best way to irrigate strawberries. The plants might be helped by the use of water hauled from the lake if it is applied in reasonable quantities. When water is pumped directly from a well onto the strawberry-bed, it is often so cold as to check the plants and sometimes will do more harm than good. It is also important to avoid getting the land water-soaked, in which case the plants may be seriously hurt. Many growers in the irrigated districts have to learn this truth before they are successful. It is a great temptation to let water run on the land and expect it to take the place of cultivation. This is a mistake and wherever possible cultivation should accompany irrigation.

Tamarack Qualities

G. H. F., Iowa, asks about the lasting qualities of tamarack. Tamarack that is red—that is, contains a large amount of heart-wood—lasts well in the ground, and we regard it as being good for seven or eight years and nearly as good as white cedar.

The sap-wood of white cedar rots quickly. The heart-wood, however, lasts well. I should regard the cedar as being good for two years longer than tamarack of the same size. Tamarack is much heavier than white cedar. For a guess, I would say the tamarack would weigh about fifty per cent. more than the cedar. This, however, is merely the impression I have gotten from handling such material.

Cutting Back Poplars

J. O. T., Iowa, has a dozen Lombardy poplar trees about thirty years old, the tops of which are bare of leaves and drying up. It may be that these trees are too far gone to recover their vigorous condition under any treatment, but it is very common for Lombardy poplars to become bare at the tops, and under such conditions the best treatment is to cut them off, when they will renew their vigor, sending out plenty of strong branches, which will take on the upright form, the same as if allowed to grow to a single stem. In this case I should cut off at least one half of the main stem and branches.

Where Catalpas Belong

The best catalpa for growing in the Northern states is Catalpa Speciosa, but it is rather difficult to get it true to name. This tree is not sufficiently hardy for timber planting in our northernmost states, but is successfully used for ornamental planting in sheltered locations in the parks there. The chances are against its amounting to much in western Minnesota. It is especially adapted to Ohio, Indiana, central Iowa, Kansas and southward.

The Truth About the German Potash Law

Among Germany's most important natural resources there are about seventy mines that furnish the world's supply of potash. At present these mines can supply more potash than the world is using, but not more than the world can use profitably, and not more than the world would be using if farmers could buy potash as readily as they can buy other things. Under these conditions there is a tendency for some of the mines to try to get more than their share of the trade.

In the past the mines have entered into short term arrangements to sell their products through a single company, organized and owned by the mines. Each mine has agreed to furnish a certain fraction of the world's demand to the selling company. This fraction was known as the quota of the mine. As new mines were developed there were usually assigned a fair quota, but occasionally a new mine declined to sell in this way and sought to secure more than its fair share of the potash trade by selling independently and usually at slightly lower prices.

When the last selling agreement expired three or four mines undertook to get contracts to supply the entire American potash trade, which is a little over one-fourth of the total potash trade of the world. Had they succeeded in filling their contracts they would, of course, have had much more than their fair share of business.

Most of the mines are owned by private stock companies, but a few of them are owned by the Prussian and other German States, not by the Royal Family, as has been erroneously stated in some American newspapers. Owing to the action of a few mines in trying to get more than their fair share of the business, the German Government passed a law regulating the fraction or quota of the world's supply that each mine might sell, and providing that each mine should have a share in both the export and the home trade.

The law provides for a commission to enforce the law and lays a trifling tax on all the products of the mines, whether exported or used at home, to pay for the expenses of the commission. About half of this tax is to be used for publicity work to increase the potash trade, and the remainder is to be applied to meet the ordinary expenses of administration. This tax is not greater than the usual State fertilizer taxes in America, which range from ten to fifty cents per ton, without regard to the value of the fertilizer. The German tax is fairer, however, in that it takes into account the amount of plant food in the different grades of potash compounds. The tax ranges from sixteen cents per ton on kainit containing twelve and one-half per cent. potash, to sixty-five cents on muriate of potash. As one-half of this goes back for advertising expenses previously met by the mines, the only additional expense imposed by the new law is the trifling sum of from eight to thirty-three cents per ton. The tax is in no sense an export tax, but is paid on every pound of potash whether used in Germany or sent to other countries. There's in it no discrimination against America or any other country.

When we recall that the ocean freight rate on potash salts may vary as much as one dollar per ton in a single month without any increase in the cost of potash to the consumer, it is at once evident that this trifling tax for administration purposes will have no more to do with potash prices than the state tax on fertilizers in the United States has to do with the selling price of our common fertilizers.

The law, contrary to the general belief, does not require the formation of a selling company or syndicate. Each mine is free to sell its share of export and domestic as it sees fit, but it must not sell for export at a less price than is charged to German buyers. There is certainly nothing in this to give the American farmer who buys potash any cause for alarm. Why, then, has our State Department been urged to protest so vigorously against the passage of this law? Why have we been told that the law means we must pay twenty dollars more per ton for all our potash salts? The law provides that if any mine shall sell more than its assigned fair share it must pay on the excess over its lawful share a much higher tax, ranging from about two dollars and seventy cents to nineteen dollars and a half per ton. This will, of course, serve to restrict the mines to the legal quota of each. But there is no intention of restricting the total production of potash. On the other hand the publicity provisions are intended to increase the consumption.

The American fertilizer companies sought to get control of all the potash coming to America. They failed to do it. They never intended that the farmer should get Potash salts direct from them and they insisted that the Germans should sell only to these companies and that the German Kali Works, which is the American Company representing the potash mines, should cease to sell mixers, dealers and farmers.

The German Kali Works was organized for the purpose of getting potash to the farmers, local dealers and mixers, at fair prices. It is a matter of indifference to them whether they sell it direct to these three classes or whether their offers cause the fertilizer manufacturers to sell it to them at fair prices. The fertilizer manufacturers do not want the farmers to secure potash except in the form of mixed goods containing about 98 pounds of phosphate and filler to 2 pounds of potash salts. Home mixing gives the fertilizer manufacturer nervous chills. It means the farmer may buy raw material, compound his filler-free fertilizer at a marked saving, and, worst of all, he will begin to figure on the money he has been paying out for filler and freight on it, not a penny of which was of any value in increasing his crop.

The American fertilizer manufacturers have claimed for years that they sought uniform prices for potash rather than low prices. The new law gives every buyer the same price. But their strenuous objections prove what many already knew, that the large manufacturer does not want the mixer, local dealer or farmer to buy potash at all except in the form of filler-loaded mixtures which place the cost of plant food much higher than it can be sold for in raw materials.

Practical Poultry-Raising

A Batch of Poultry Hints

NO FOWL can be healthy that is creeping with vermin or confined in a close, ill-smelling pen reeking with dampness and lice. I allow my fowls their choice of house or trees and, except in bitter cold weather, they choose the latter. This is in northeastern Tennessee, and while we do not have the frigid northern winters, the weather is by no means always balmy. In twenty-odd years of poultry-raising I have had but few cases of roup, cholera, diarrhea, and none of rheumatism. I lost a few now and then with cholera until I began feeding a teaspoonful of turpentine once a week in dough.

I always make free use of coal-oil, soap-suds and carbolic acid about the coops, feed-troughs and poultry house. Lime, grit and pure water are at all times accessible.

The feed depends on what I am feeding for. For egg-production, I find nothing superior to equal portions of wheat-bran, ground corn and oats. For putting on flesh, sloppy feeds are best.

My young turkeys have made excellent growth this summer without one fatality, on the simple ground hominy (cracked corn) cooked soft and rather dry. After the first feed they refused all others and have done so well I shall adopt it as my future turkey feed.

At six weeks old they are now eating shelled corn and need no attention except to be let in and out of their pens, which are large and roomy with poles across for them to fly up on.

It happens now and then that a bunch of turkeys or chickens, by accident, are well-nigh drowned. Never throw them away without making a try at reviving them. I brought six young poults to life, and a number of chickens that were seemingly stiff, by immersing their bodies in warm (not too hot) water a few seconds, then opening their bills, blowing in their mouths, pulling out their wings, stretching their necks out and simulating the breathing process as near as possible, then wrapping them in warm cloths with their heads uncovered and keeping them warm. When they could stand on their feet, I gave each a grain of black pepper, greased their throats and breasts, fed them and kept them by the fire until quite dry. Next day they were as pert as any of their mates.

A spoonful of flour, half a spoonful of ground pepper and three of water mixed and given in three doses will usually cure the diarrhea.

Scraps of fat meat rolled in soda and fed to a rousy fowl will often effect a cure.

For crop bound I give a calomel tablet if the trouble is discovered in time—otherwise an operation is the only remedy. After the contents are removed and the openings closed, care must be taken to feed soft, easily digested food for a couple of days.

Mrs. D. B. P.

When Ducks Eat Rose-Bugs

DO you realize how much animal food is needed, and sought by ducks, as compared with chickens and other fowls? It is surprising how many duck-raisers fail to recognize this. To bring out this point and also, perhaps, to help some one else in similar trouble I would like to tell the experience of a sister breeder of Indian Runners when the rose-bug pest swept her section of New York last summer.

She had quite a flock of ducks of different ages which had the run of the farm, as also did her hens and chicks. When the rose-bugs made their appearance, several of the old ducks died, as well as numbers of young ones, whereas the other poultry did not suffer so badly, though some showed signs of illness.

Then she began to build small out-of-doors pens for the ducks, putting those of different ages by themselves. One pen was built near the buildings where coal-ashes had been dumped and it had never grassed over. (By the way, ducks seem very fond of coal-ashes.) The ducks in this pen without any grass seemed to thrive right along, with no more symptoms of rose-bug poisoning. Others in the grassy pens continued to show cases of sickness and occasional deaths.

She then wrote to the nearest experiment station and was put in communication with an expert who had made a specialty of this pest in all its aspects. It was quickly made plain why the ducks suffered more than the chicks and why the grassless pen was free from further losses, while the grassed pens still continued to suffer.

It seems that the larvæ of the rose-bug hatch and develop to maturity in the grass-roots. The ever-busy ducklings,

always boring and searching about the roots, got enough of these larvæ to make trouble, even when confined. Hens and chicks did not suffer so much, because they are contented to take most of their insect food on the wing, though hens sometimes do die from eating rose-bugs when they are thickest, if not confined.

Knowing these facts, my friend saved the remainder of her flock by putting them on grassless runs or board floors for a few weeks until the bugs had disappeared.

Mrs. E. G. FEINT.

A Business Poultry-House

IT is not my aim in this article to try to teach the farmer anything about raising poultry, but I'll try and show him how to build a neat and comfortable place for his flock at the least possible cost. To pick up a book of plans, which

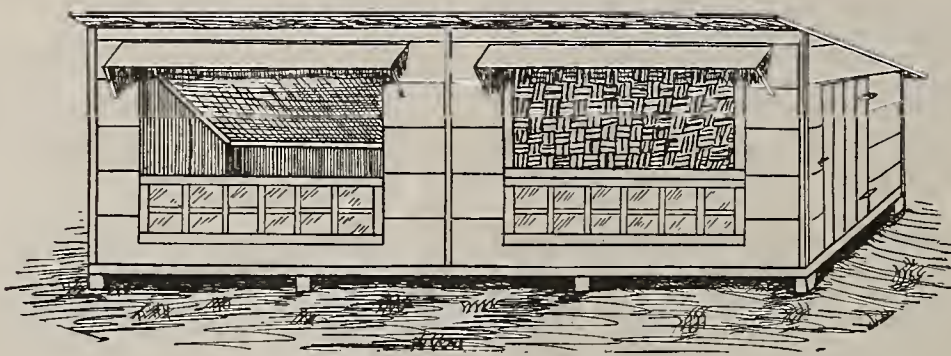


Fig. 1—Front View of the House

shows possibly a hundred different ones, is confusing. Moreover, a great many are drawn from theory, not practice. The following plans, drawings and the itemized bill for material are taken from houses that have stood the test right here at "Old Homestead Farms."

The floor plan (Fig. 2) is twelve by twenty-four feet. A partition at the center divides it into two rooms twelve by twelve feet. One room can be used for a roosting-room and one for a scratching-place, and under this arrangement thirty or thirty-five fowls may be kept without crowding. Where there are two breeds to be kept, both rooms should be arranged as shown in Fig. 3, which is a complete room.

The house is seven and one-half feet high in front and five feet in the rear. The openings for the windows are six by eight feet, four-by-eight-foot curtain and two-by-eight-foot glass. The openings are covered on the outside with wire netting. The curtains are framed and hung so as to swing up and may be fastened to the rafters out of the way. I have tried making the curtain in one room of burlap and in the other of muslin. The burlap admits more air than the muslin, therefore in warmer climates it is best to make both curtains of burlap. Muslin is better in colder climates than ours here in northern Kentucky.

In Fig. 2, AA represents the front line

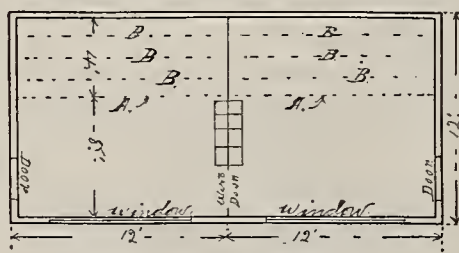


Fig. 2—Ground Plan

of the dropping-board, which is four feet wide and twelve feet long. The perches (BBB) are made of two-by-four-inch pieces, with the top edges rounded, and are eleven feet long; they do not touch the wall at either end. The perches are ten inches above the dropping-board, and the dropping-board is twenty inches from the floor. Under the dropping-board is where the nests are placed. Cracker and canned-goods boxes answer for these. There is a curtain in front of the perches, to be lowered at night and raised during the day.

The partition between the rooms is made solid with boards as far out as the front edge of the dropping-board, the balance is wire netting. The door is also wire netting and hangs to open against the front wall. The partitioned box between the door and the perches is for charcoal, grit, oyster-shells and crushed bones. The water-fountain is fastened to the wall at the opposite side of the room, near the outside door. A part of the front of each nest-box is removed, and the lower half left curved out as shown in drawing.

Fig. 1 shows a house built on pillars, and which has a plank floor. But where sand and gravel is convenient a concrete

floor is much the cheapest and much more satisfactory. Where concrete is used, the sills, two-by-six-inch pieces, are fastened to the top of the walls with iron bolts that are set in the wall as it is made. An excavation eight or ten inches deep is made and filled with coarse gravel or broken stones to within four inches of the top of the wall; then a coarse mixture of concrete (seven to one) is put in, three inches deep, and finished with an inch of fine mixture (three to one).

The siding should be dressed on one side so that there will be an even surface to receive the tar-paper or prepared roofing that is used on the outside. The dropping-boards should be of tongued-and-grooved stuff.

The house must be made as tight as possible all over. The place for ventilation is through the curtained windows.

Bill of material for house: Twenty-

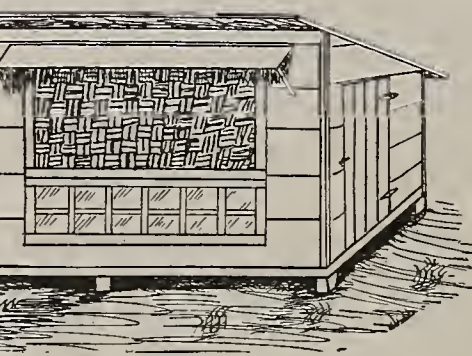


Fig. 3—Showing one Room and Equipment

three pieces two by eight inches, twelve feet long, joists and sills; thirteen pieces two by four inches, fourteen feet long, rafters; thirty pieces two by four inches, twelve feet long, perches and inside framework; one hundred feet of tongued-and-grooved flooring, dropping-boards; eight hundred feet of common siding, sides, sheeting, etc.; one hundred and fifty square feet of poultry-netting; thirty-two feet of burlap, one window curtain; forty yards of muslin, one window curtain and curtain in front of

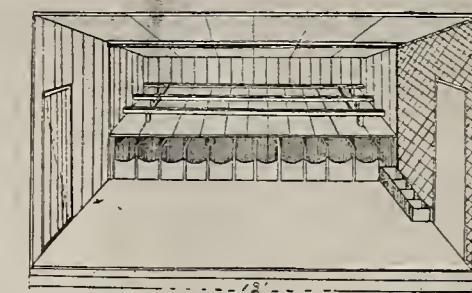


Fig. 3—Showing one Room and Equipment

roosts; twenty-four lights, glass, eight by twelve inches; seven and one half squares of roofing; five pairs of eight-inch strap hinges; fifty pounds of nails, assorted; one hundred linear feet of one-and-one-half-by-three-inch material for curtain and inside door frames.

The above plans, or course, are subject to detailed changes. We have been changing for several years and the plans herewith shown are what we have now settled on as handiest and most complete.

As the price of material differs in different places, I have given no figures on same, but a house such as I have described may be built for from eighty to one hundred dollars.

J. W. GRIFFIN.

Why Chicks Get Footsore

ATENAS subscriber writes: "My little chickens not more than three or four days old get swollen feet. Some die, a few get well. With some the toes drop off. Have had this three seasons. Everything I've tried to cure with has failed, so come to your valued paper which we've taken for thirteen years. The soil they are on is dark ground and very dry."

Rheumatism is the usual cause of chicks having swollen, sore feet and legs. Yet other conditions can cause the same. We cannot say it is rheumatism proper—because that means chicks brooded on cold, damp grounds. Sometimes the chicks hatched from the eggs of over-fat hens or fowls sadly inbred will show leg rickets from the very start. The remedy for this is a better cared-for flock.

You speak of dry, black ground. There is a disease of chicks of strong flocks that are incubator-hatched and brooder-kept that I call "heat rheumatism." I have had it also come to hen-hatched chicks kept out on blistering sunny ground. With these last the foot and toes seem burned, and the tender toes come off, but in the brooder-kept the dry, hot boards seem to cause the toes to double under. Chicks heavy fed from the start seem

most susceptible. With these the joints swell largest. Chicks hatched from hens diseased with scabies (scaly leg) sometimes develop the same disease soon after hatching. Chicks running in loco weeds often show up with swollen, sore feet.

These are the most common causes for the condition you describe. In your case I believe the dry ground is the main factor, especially if the direct rays of the sun fall upon it. If you judge this to be it, then I can recommend the remedy used when chicks become lame from the brooder floor heat—that is, dampness. Outside the brooder we moisten the floor and keep the chicks eating over this damp floor. This counteracts the dry heat of the inner floor. Also, in your case, give but little of the egg-yolk feed. Vary it with cracked grains and wheat-bread wet with milk. For medicine in lameness from either true rheumatism or the kind induced by heated floors or grounds, I have found nothing so good as ordinary baking-soda, a scant teaspoonful of the baking-soda to every quart of the fowl's drinking-water.

I. M. S.

Overcoming Chicken Cholera

I WOULD like to tell the readers of FARM AND FIRESIDE my experience in feeding milk as a cure for chicken cholera. I give my chickens, old or young, sweet milk, sour milk or buttermilk. Poultry like buttermilk and it is just as healthful for them as for people.

About every third or fourth day I add one teaspoonful each of ginger and soda to each gallon of milk and stir until thoroughly dissolved before giving it to the chickens. This tones and sweetens their digestive organs. I have never had a case of indigestion or cholera since I began the use of ginger and soda in the milk. Nearly every farmer's wife has milk enough to spare to try this simple preventive.

When I see a chicken looking dumpish and dull, with droppings greenish, I place her in quarantine in a coop down in the garden on the plowed ground. If the weather is hot, put the coop in the shade of some tree or between the rows of sweet corn.

At each feeding-time move the coop along to a clean place and with a shovel or hoe cover the soiled place, as the droppings are very offensive.

Now for the feed: Never feed any grain to a sick chicken.

Boil some new milk and when it cools add some bread, burnt crusts if you happen to have some, and feed three times a day and give her some of the boiled milk to drink. Give charcoal, oyster-shell and good fresh water, and keep the feeding and watering vessels scalded clean each day, and Biddy will soon be better and the droppings will become natural in from six to ten days, when she may be turned out and allowed to range for her living. But keep the grain away from her a while.

Since I commenced using this remedy I have never lost a case and others have used it and found it to be worth trying. As I have never seen this remedy in print, I send it, hoping some one will give it a fair trial and will write their experience.

A SUBSCRIBER.

Butter and eggs make a good pair when you go to town.

Some grit is little better than none at all. See that yours is good and sharp.

The insects annually destroyed by a flock is a benefit the fowls render which is not always taken into consideration. Turkeys and guineas, particularly, are active foragers.

If possible, it is better to locate the chicks where the old fowls cannot trespass because some of the old birds are sure to be around at meal-time to annoy the little fellows.

Mark the earliest chicks and don't allow the lure of high prices to tempt you into parting with a single one of them. These early pullets are the very ones which make the profitable winter layers when eggs are sky-high.

Don't forget about thoroughbreds. It don't cost any more to raise and keep them, and they will return five times more profit than mongrels. I know it, for I have tried the two kinds side by side. Be successful; raise good fowls.

Many a farmer wonders why his eggs don't hatch well, when the fault lies in the fact that the flock is headed by a male suffering from some form of testicle trouble, and impotent. I have bought fine young birds that had no indication of it and yet thus suffered.

Live Stock and Dairy

In Spite of Hard Knocks

IF I had a chance, I would show you! I could do things worth while if I had been born like some other folks, with a silver spoon in my mouth!"

How often we hear something like that from men who have not done very well in life. It is so easy to lay ill success to somebody or something else.

Ten times better is it to make the mark, to win the success, to do things when one has not been gifted with a silver spoon at birth or had the grand chance others have had.

Not long ago FARM AND FIRESIDE published the story of a man who owns a young cow which had broken the world's record for milk and butter production for an animal of her age, Mr. Eugene La Munion, of Solsville, New York. There was something inspiring about the account of the performances of that cow, in and of itself. To be the possessor of a cow like the one mentioned certainly is a thing to be proud of and to awaken the ambition of every farmer who knows about her.

But there is more to that story than was then published. And that something surely cannot but be far more inspiring than the plain record of the number of pounds of milk the cow gave and the way the achievement was brought about.

Mr. La Munion has done all he has done in spite of the hardest kind of hard knocks. When he went on the farm, there was a big debt against the place. The buildings were poor, the barn particularly so. This latter building is a small structure with rough, unpainted boards. There were, at the time he took up the reins, absolutely no modern appliances about the place. A fairly comfortable house stood across the road from the barn. The accompanying pictures show these two buildings just as they are to-day, inside and out.

To read the story as published some time ago, a good many no doubt thought, "Well, that man has everything right at his command. He is rich. He can do just as he has a mind to. He has a big barn and a pocketful of money to fix things up with. No credit to him for doing what he has."

But this is very far from the actual condition of things. All this man has done has been in spite of his surroundings, not because of them. Taking the place just as it was, he started out to do the very best he could. His first object was to build up a good herd of cows. That, it seemed to him, was the foundation of success. Working along slowly and patiently, almost unknown to even his nearest neighbors, he gradually improved his barn by putting in a cement floor, swing stanchions and a few other up-to-date equipments. But the picture we show herewith proves that even now this barn is very far from being what men would call perfect. Look at the rough beams overhead! See the walls of the stables! Note the general appearance of an every-day fight with untoward circumstances.

But do not overlook that magnificent silo which stands at the back of the barn! Forty feet that silo rises and large in proportion. The barn proper could wait a little longer. There might be need of some things at the house; time would bring those; the silo was needed most of all, for that would help about building up the herd. Mr. La Munion built the silo mainly from material that was on hand, but the work and material that could not be obtained at home cost something like two hundred dollars. Any one who knows anything about silos will conclude how well the work was done. The day I saw the silo I felt that right there was one secret of the man's victory over adverse circumstances.

And what he could not do with money he made up in care. Oh, I tell you, fellow-farmers, it will be a splendid day when we all come to understand fully the real value of care in all our operations. We may lack many things. We may be handi-

capped for lack of funds to do with. We may not be able to hire help or to buy costly equipments, but we can all exercise good care in stabling, feeding, grooming and otherwise dealing with our cows. Our failures are not due so much to the lack of these things as to loose, slipshod methods. We push and push hard in every possible way except this one. We scrimp to buy tools and to build barns, but we waste like very spendthrifts in the matter of good, common, every-day care.

The day I was at this farm I could not help noticing a pair of scales hanging in a prominent place in the milking-stable. I see that somehow it does not show in the picture we have of the stable. I am sorry, for that simple dairy instrument preaches a fine sermon to every man who steps into the room. Those scales enable Mr. La Munion to know what every cow is doing. No guesswork about it. Every



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The Silo Was One Secret of This Man's Success

cow is brought to book and made to answer the question, "What are you actually doing in return for the feed and care I am giving you?" The cow which does not satisfactorily answer this question is dealt with accordingly, no matter how long a pedigree she may have behind her.

And there are some boys and girls on that farm, too. One little chap whose head does not come very high above the top of the table as he sits down to dinner has all the vim and the energy of his father and mother. They told me how many cows the boy had milked one night not long ago, but I would not dare to repeat the story. It certainly was fine; but how careful his parents are that he shall not do too much while he is small! They do right by him; they hold him back, instead of praising him and pushing him on to do still more. To have a lot of boys and girls that love the old farm so well and be ready to do all they can to build it up is surely a most cheering thing.

And here is the story. Is it not inspiring? Does it not fire us all to do our level best, no matter how we may be situated?

EDGAR L. VINCENT.

The Meat Situation Analysed

THAT there is a marked decrease in beef production is clearly shown by a few figures and statistics. The Annual Report of the Chicago Stock-Yards and Transit Company shows a smaller number of cattle on the Chicago market than during any year since 1900. One half of the beef in the United States is produced by six states—namely, Texas, Iowa, Kansas, Nebraska, Missouri and Illinois. During the past two years all of these states have decreased in their cattle production, the average decrease being six per cent. The total decrease in the United States for two years past has been 2,186,231 head, or 4.2 per cent. These figures are even more startling when we consider that the increase of population for the last two years has been greater than ever before.

The decrease in beef production is not limited to this country. North America as a whole has had a decrease of fully three million head. Argentina, our greatest rival in European markets, has one million head less than in 1905. European Russia has had a decrease of one and one half million head, or 4 per cent. Germany has increased in the number of dairy cattle, but decreased greatly in beef animals. The remainder of Europe, all of Asia, Africa and Oceania, have barely maintained the same number in spite of the great increase in population. The decrease in meat production is not limited to cattle. A smaller number of hogs were marketed in 1909 than in any year since 1896. In 1906 4,805,449 sheep went upon the Chicago market while in 1909 there were only 4,441,424 head.

By careful investigation we find that there are several causes for the decrease in beef production and the corresponding high prices. Letters from stockmen indicate a wide-spread tendency to abandon extensive live-stock production. Following are some of the causes which have been instrumental in bringing this about.

First—For some time grain farming has been more profitable than live-stock production, especially in the high-priced lands of the corn belt, because feeds have been relatively higher in price than animal products.

The grain acreage has been extended and herds reduced. Second—The universally increasing price of land has brought about a very marked change in agricultural practice. The most profitable production of beef has been largely associated with cheap lands, especially in the West; now the ranges are breaking up at least in large part.

Third—The depopulation of the rural districts has caused a serious shortage of farm labor. The difficulty of securing help or tenants experienced in live-stock management has tended still further to decrease live-stock raising.

Fourth—The tempting results obtained from dairy farming have led many farmers to abandon beef cattle and take up dairying. The dairy cow returns more fertility to the soil, is three times as efficient as an economical producer of food nutrients and returns more profit for the money invested than the beef cow. The majority of stockmen admit that a cow can no longer be kept for the calf she produces.

Fifth—Under intensive conditions many farmers have been able to practise a simple system of exclusive grain farming and yet maintain the fertility of the soil. Such systems are not always successful, but are more feasible than beef production at the low prices of the past decade.

Sixth—There has been and still is a very general lack of appreciation of the worth of the manure produced by farm stock. Many farmers look upon the manure-pile as a nuisance rather than a mine of fertility which should be cared for and distributed upon the land as carefully as the seed which produce the crops. If more farmers realized the real value of manure, more stock would be kept.

[CONCLUDED ON PAGE 11]

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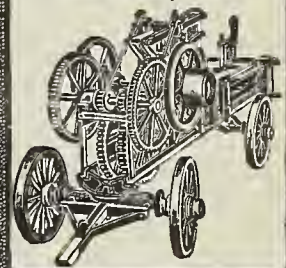
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Farm and Fireside, Springfield, Ohio

Live Stock and Dairy

Three Dairy Needs

THERE are three prime needs of the American dairy at this time. Need One is: Dairymen who like the business, who have taken and are taking advantage of every available means to intellectually equip themselves for their business. It won't answer for them to be only good dairymen. Men with only one idea or function developed are out of joint with the farm. We want at least octagon men, with every side polished and finished up to the requirements of the job. We need men who can raise the proper crops to keep the farmer in proper heart, to feed those crops to proper cows, sell the product in a proper way and use money, influence and proper citizenship for proper advanced American institutions and their proper governmental administration. That is the kind of man who will make a good dairy farmer.

Need Two: Better cows. Really, if we have Need One, all the other good things will be added thereto, but while we are getting this man in numerical proportion commensurate with the width of the business, we must keep on dairying with such man material as we have at hand. Moreover, man is an animal that breeds up but slowly. The only real operative force in his up-breeding is environment. Heredity counts for much if he will think so and strive to live up to the possible good of it. In domestic-animal breeding we count much on selection, and have made considerable progress in it, but in men breeding this factor is cut out and we can only count on good mothers and proper environment.

But dairying must be done. The babes in town and country must have milk and the chewing population must have butter and cheese and milk, and the picnic girl must have ice-cream. And we must have cows and we should have droves of better cows, such as are running-mates with the new needs of country living conditions. We need cows that shall be inspirational to this advanced dairymen in his evolution. We need cows that while keeping the nipple in the mouth of the town baby shall not take it out of the mouth of the baby on the farm. The farm interest (while not listed in existing tariff schedules as "infant industry"), being the first one, should be the most important, and we want it taken care of by this better cow.

She must be a cow able to use a lot of farm feed to profitably make a lot of milk-feed for the children everywhere. She must transmit her good qualities and tendencies to her sons and daughters so her honor and her good work may have cumulative succession.

Need Three is that a much larger production of this good cow's ration must be on the farm. There must be all the good grasses, more hay and better hay, more grains and better grains, great crops of corn gathered into good silos. There is no other feed that is quite as versatile as our indigenous Indian corn, and we need to take advantage of all the good this great crop offers—all its possibilities.

But we need more than corn. We need clovers, alfalfa, oats, barley, rye, sorghum, cow-peas, soy beans, vetch, rape and the roots—all the valuable feed crops that can be raised with profit—and those that cannot be raised with profit should be dropped from the list. It does not follow that because my land here in Pennsylvania grows a certain crop with profit that your land there somewhere else will profitably grow the same crop. Then your land may have favorite crops not in favor on mine. We need to prove all these things and hold fast to the ones that are good.

From Malthus down our political economists have feared that the products of the land would not be equal to the needs of the population, but we American farm-

ers can reassure the living economists that we have not tried as yet. The progress we have made has been merely a tentative venture. We will make a real effort when the demand urges us and the compensations sufficiently stimulate. That time is about here. Watch our hump.

This new dairymen, with his fitting equipment of training and cows, will set the pace for all others of the farm to follow; and we who know farming and land in America, know we can feed all our people—well, we will say for a thousand years—and many a thing can come to pass in a thousand years.

W. F. McSPARRAN.

Veterinary Myths

IN YEARS gone by there were many who believed in such mysterious diseases as hollow horn and hollow tail, and claimed to effect a cure by making a hole in the horn or the tail as the case might be and inserting turpentine or salt and pepper. It mattered little what was really the matter with the animals, they were treated for hollow horn or hollow tail. Sometimes they got well and sometimes they died. If they did not die, it was not the treatment which cured them or, in other words, it might be said that in spite of the treatment the animal lived.

The advance in veterinary science has never led to the discovery of any disease that might really be termed either hollow horn or hollow tail, and as for the treatment which of old was applied, there seems to be no foundation that would prove it advisable. There may, of course, be some merit in the use of salt and pepper, but its application to almost any other part of the body would probably be as valuable as to put it in the horn or tail. Often a cow will show loss of appetite, followed, naturally, by a sudden falling off in milk-flow, and the cow gets generally out of condition. Some dairymen even to-day diagnose such cases as hollow tail and insert salt and pepper. A treatment which would be simpler and probably accomplish more good would be to give the cow a quart of raw linseed-oil or a pound of Epsom salts dissolved in half a gallon of water. The results that will follow will generally be gratifying, and then instead of hollow horn or hollow tail the trouble will likely be identified as a minor derangement of the digestive tract. **HUGH G. VAN PELT.**

Lumps on Neck and Face

A MARYLAND subscriber writes: "One of my cows has lumps on her neck, shoulder and face from as large as a walnut up to a base-ball." A condition like this is generally a very serious one, and the best thing to do in such a case is to have a reliable veterinarian examine her and prescribe treatment.

From the description given, of which the above forms a part, it is not possible to tell with certainty whether this condition is lumpy jaw, a disease that is very often curable. According to Doctor Biting, in treating this disease the lumps should be opened, and if any pus is present, it should be allowed to drain out. The cow should be given a dram of iodide of potash twice a day for twenty days. If this does not effect a cure, the remedy should be discontinued ten days and then repeated. **H. G. V. P.**

Horse Thirst

IS IT good to water a horse at nine or ten o'clock at night if the horse had water at six o'clock?" asks a New York subscriber.

A horse should have all the water he wants, and the more frequently the better. He should not, however, be watered when heated or allowed to drink an inordinate quantity at one time. **DAVID BUFFUM.**

* * *

Don't allow the drivers to gorge themselves on green grass just before being hitched up. If they are on pasture, tie them up an hour or so—till that full, bloated feeling passes away, and they'll drive better.

Cut that corn-row that waves so temptingly near the pasture-lot fence, and toss it over to the cows, thus removing the temptation and furnishing supplementary feed when pasture is short and dairy rations hard to secure.

It will pay to buy old corn even at a high price, and market the hogs early in September, about the time other farmers begin to feed the new crop. You will thus secure the top price preceding the inevitable drop that follows the fall rush to market.

Let Silos Follow Creameries

DURING the month of June the conditions are perfectly natural and ideal for milk production. But I go on the theory that a man ought to study to produce the most milk at a time when it pays him best, and that is not in June. The dairy business is like all others—if we are to succeed we must row against the current a little—try and have June conditions at other times of the year. Nothing ever came so near turning December into June for dairy cattle as the silo.

Nature's feed for the production of milk, growth and fat is tender and nutritious pasture-grass, but in northern latitudes this is available for only a comparatively short time. For the balance of the year one must provide prepared feed. Corn-ensilage is not only the cheapest, but it closely approaches pasture-grass in its efficiency. Experience has proved that it is unsafe to depend on pasture-grass alone, even for summer feed. Under the most favorable conditions pastures are sure to diminish in carrying capacity as the advance of the season checks their growth, but if there is silage on hand the farmer can defy even a drought.

The silo has doubled the stock-carrying capacity and solved the problem of intense culture on thousands of farms. The strongest proof of its value is the length of time a diminutive supply of hay will last when supplemented with ensilage. One acre of corn will yield from twelve to twenty tons of corn ensilage equal in nutritive value to six or eight tons of hay. Furthermore it occupies but one fourth as much space when stored away, so that a comparatively small amount of mow room is required to store enough roughage to winter a large herd of dairy cattle.

Valuable feeds like alfalfa and clover can be fed cheaper and better when fed with ensilage. It furnishes the succulence so much needed by the cow during her long period of confinement. It has an actual feeding value far beyond its chemical analysis, for the reason that it promotes a healthy condition of the digestive system and enables the cow to make a more economical use of other roughage and grain foods. Ensilage when properly cured will put a gloss on the coat and give a sleek, sappy appearance that no other feed will. All these facts, together with the high prices of grain and commercial by-product dairy feeds, are setting dairymen to thinking. Cheap grain and by-product protein feeds are a thing of the past and the successful dairymen of the future must make the best use of the silo.

It is a waste of grain to pour it into dairy cows unless they have an abundant supply of palatable roughage. A bare pasture in the summer and dry hay and fodder in the winter does not furnish this. A careful study of milk yields and dollars tells the story of the silo's value more eloquently than words. On many farms it has doubled the yield of feed products and dollars.

Tightening competition has compelled Eastern dairymen to use the silo. Let Western dairymen awaken to their opportunities and make a better use of their corn fodder. Fully one third of the nourishment of the corn-plant remains in the field when the corn is husked from the standing stalk. Even when cut and shocked there is an enormous waste both in quality and uneaten stalks. Here is where the silo comes in, affording a way to preserve fodder, without waste and in the condition in which it will have the greatest feeding value and will be relished most by the cows.

The importance of succulence in the ration is not a new discovery. English feeders and flockmasters have long depended on root crops as a source of succulence. This, coupled with the fact that an acre of corn will yield twice as much dry matter as an acre of roots and can be produced for about one third of the expense, proves that dairymen who build silos are on the right track.

Ensilage can be stored at fifty to seventy-five cents per ton if economy and good judgment are practised. This includes cost of cutting the corn, twine and filling the silo. To have good ensilage we must have a silo tight and rightly proportioned to feed out economically. It should be planned so that two inches of the surface can be fed out every day to prevent mold. This cannot be done if the diameter is too great. The entire surface should be removed each day in warm weather. When building, build well and permanently, for the silo has passed its experimental stage. There is no question but that the silo must follow the creameries and cheese-factories, for it is in line with agricultural progress and it has proved its right to a place on the well-managed dairy farm.

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Live Stock and Dairy

The Winter and Spring Lamb Specialty

THERE are many good reasons why the occupier of a mixed arable and pasture farm, who has become convinced of the value of sheep as money-makers and as conservators of soil fertility, should make a specialty of the breeding and feeding of lambs for the winter and spring (Easter) markets. They are as follows:

In all domestic animals the greatest growth is made during the first few months or even weeks of their lives. This provision of Nature has been proved by many careful experiments to be very strongly developed in sheep; the cost of producing one hundred pounds of gain in lambs up to four months having been determined to be, approximately, four dollars; in wethers at a year old five dollars and seventy-five cents; at two years six dollars, and at three years and upward seven dollars. This cost, of course, varies with different methods of feeding, but the proportions remain constant.

The longer an animal remains on hand, the greater the risk of loss. This may seem a platitude, but there are reasons why special attention should be paid to the fact in the case of lambs. The lamb which meets its "happy despatch" at the hands of the butcher at Christmas or Easter never, or very rarely, encounters the miseries and dangers of the numerous species of worms and parasites to which he is almost certain to be exposed if he survives to share in the joys of the early spring grasses. The poets have delighted to describe him as frisking and romping in the meadows in May and June; but they fail to remark that the frisking is too often caused by the wriggling of the worms in his interior. These worms, if properly treated with simple, well-known remedies by the watchful shepherd, are not dangerous, but, if neglected, will stop all progress, spread rapidly through the flock and often prove fatal.

The demand for early lamb never fails; prices are always remunerative and often surprisingly high in really choice black-faced lambs ranging from sixty to eighty pounds. I have sold such at fifteen dollars per head and considered that they paid me from eight to ten dollars profit. It must, of course, be remembered that such lambs are the exotics of the farmyard, grown with much care; but for all that they require no more real labor than their less highly finished brethren. It would be a wonderful bunch of twenty-months-old wethers that would approach these ninety-day babies in price; and wethers that command top prices cost at a vastly higher rate than lambs pound for pound and often get passed over by fastidious buyers as too fat.

Culling at a Profit

I have found the rearing of these lambs a very profitable way of weeding out the aged "full-mouthed," or "broken-mouthed," ewes. These, if rightly fed and of the right breeds, are generally good milkers and good and prolific mothers. They seldom very strenuously object to their lambs sharing the grain ration at a very early date, and if generously fed, will, while pushing the lamb along very satisfactorily, make rapid gains themselves. In from seventy-five to ninety days they, as well as their lambs, will be ripe for market and will command fair prices. Their going with the lambs is a great help to the latter, especially if the ewes are well bred, and they are a good advertisement for their grower.

By careful watching it is easy to pick out the ewe-lambs, in three or four weeks, which are not laying on flesh. These are oftenest large-framed lambs which are growing instead of fattening, and are just those which will pay best to keep for the breeding flock. When found, it is best to separate them in a bunch from the flock, dock their tails and put them in a small pasture or a yard, of course with good shelter. Give them a small grain allowance of oats, bran or linseed-meal, with hay (clover is best) and roots (mangels or turnips), and let their mothers have access to them once a day. At, perhaps, eight weeks old they will be able to care for themselves and can be turned in with the main flock. Care must be taken that they get their fair share of the grain ration, for it is the greatest possible, and the most frequent, mistake a sheepman can make to suppose they, or in fact any sheep, can do without from November to May. The mothers will soon dry out and make rapid gains so as to go to market at the same time as the other ewes and their lambs.

Careful experiments made by the Wisconsin Station and by individual experts have determined that sheep gain in weight at less expense than swine. Lewis found that sheep increased eleven pounds, while hogs increased nine pounds for the hundred pounds of dry matter consumed; and this increase is greater in lambs than in older sheep. In an experiment with cattle the sheep ate forty-eight per cent. more than the cattle, but gained seventy-five per cent. more.

The quick financial returns from this system of lamb breeding and feeding are often a very acceptable help to the farmer. Another good feature is that, though lambing-time is a season of much labor and anxiety, it is soon over; and to the careful, methodical man, with a love for animals, the rest is work which he will learn to delight in. If possible, I would advise the inexperienced in this line to secure the help of an expert during lambing-time. High wages paid to such a man during the first season will be amply repaid by the knowledge gained and stored for use in after years.

Such, with other points which will present and elucidate themselves as "practice makes perfect," are some of the reasons why the breeding and feeding of early lambs is a "good game to get into." The best methods of breeding and feeding lambs for this purpose, as well as of those for the fall and winter markets, will be considered in a future article.

JNO. PICKERING ROSS.

Another Udder Treatment

I AM moved to remark about udder trouble in cows, which subject I notice was treated in your May 10th issue, in answer to queries from Pearl, Michigan, and from Cache County, Utah. I am inclined to believe these cases both have the same trouble, only one is much more aggravated.

For caked udder, nothing is better than massage with lard and turpentine, equal parts, thoroughly worked in.

I had a cow with much the same symptoms as your Pearl correspondent's. In my case I believe it was caused by the cow frequently lying on her much-distended udder just before calving in such a way that one of the teats was protruded from under the cow, much distended, and in time became swollen. After calving the symptoms were as described by Pearl. Twice a day I massaged thoroughly with a mixture of one dram fluid extract of belladonna to one pint of witch hazel. Once a day, after the teat was milked dry, I injected by means of a medicine-dropper about a teaspoonful of melted vaseline, warm but not hot. In two or three days the condition was apparently well. It came back slightly in three or four weeks, but yielded to much less treatment. There has been no trouble since and it is about three months since she calved. The above liniment or wash is excellent for almost any soreness of the teats or udder. I have used it for years.

"UDDER."

Raising Orphan Baby Pigs

LAST February a neighbor had a brood-sow that had seventeen little pigs—too many to be properly nurtured—and he asked our family to take three of them. We took them when they were not quite a day old, and when they were brought home they were nearly dead, and not one of us expected them to recover. But we warmed them and fed them with a spoon and soon they got quite lively.

We kept them in the house during the cold weather and fed them cow's milk diluted with a little water, to which was added a little sugar. They thrived nicely for about a week, when bowel trouble set in, but a few doses of lime-water and boiled flour set things aright, and after that their growth was rapid and uninterrupted. Indeed we have never had pigs that made a more vigorous growth, and our family regard this success as their greatest triumph of the year.

Lime-water and boiled flour are an excellent corrective of bowel trouble in young stock.

JAS. B. STEPHENS.

Raising pigs by hand is indeed something of a triumph, as any one can testify who has tried it. In one respect, though, we think our correspondent's method could be improved—it was right to add sugar to the milk, but it would have been better to add no water. Sow's milk is richer than cow's milk not only in sugar, but in fat, and the richer the substitute milk, the better it is for the youngsters.

EDITOR.

What Makes Milk Ropy?

AN INTERESTING question is raised by an Ohio subscriber, who wants to know what makes his cow give ropy milk. When this trouble appears in a dairy herd, a rather searching investigation is in order, for there are several reasons why milk may become ropy. The first point to look to is the food the cow gets. For instance, this particular inquiry states that the cow eats leaves from fruit-trees. It might possibly be that some of these leaves or some plant which she secures in the pasture is the cause of her ropy milk. This can be determined by keeping her in the barn for a few days.

Secondly, the cow may be troubled with garget, an infection of the udder quite difficult to cure. A cure can be accomplished, however, by milking the cow several times daily and by massaging the udder thoroughly each time with hot or very cold fomentations of water, keeping up this treatment persistently.

The most likely cause of ropy milk, however, unless it is stringy at once when it leaves the teats of the cow, is the presence of some germ in the barn, milk-room or lodged in the milking utensils. This germ may be very hard to get rid of. To do so the barn and milk-room must be cleaned and disinfected; all pails, cans and milking utensils must be thoroughly scalded after each milking and kept in the sunshine when not in use. These utensils should never be rinsed in cold water, but always scalding water or steam used in cleansing or rinsing them, especially at the last rinsing.

Sometimes there is a pond or a mud-hole in which the cow stands some time during the day and an infection gains access to the udder from this source. If such is the case, the pond should be fenced away from the rest of the pasture so the cow does not have access to it.

By looking into all these points the cause will likely be found and by careful application of the directions given the trouble can soon be eliminated.

HUGH G. VAN PELT.

How to Relieve Impaction

WHEN a sick horse lies down and doesn't struggle, but raises its head and looks anxiously at its flanks, and refuses to eat, it isn't colic that ails it. It is impaction, or failure of the bowels to move. Some quacks begin to dose with strong medicine; but the only common-sense method is to drench with raw linseed-oil, and inject a gallon of warm (not hot) soap-suds, made with pure castile soap, being careful not to pump too hard.

If this fails, and it sometimes does, grease the hand and arm to the shoulder with lard, insert in the large intestine, and claw out the obstruction with the hand. It is not a nice job; but there is plenty of soap and warm water in the world, and the life of a horse is of more value than a little over-daintiness. I've had it to do, and it works.

C. E. DAVIS.

The Meat Situation Analyzed

[CONTINUED FROM PAGE 9]

Seventh—The strong tendency toward landlordism and tenantry in the corn-belt states has been a large factor in the decrease of meat animals. Bankers, merchants and professional men invest their money in farm-lands. They take little interest in the improvement of the property. The rental gives a fair rate of interest and the rise in the value of the land itself will eventually bring them a large profit, hence they allow a yearly succession of renters to rob the land of fertility rather than encourage their tenants to keep livestock and build up the soil.

Future prospects for beef production are bright for several reasons. All indications lead us to believe that the present high prices will continue. First, there is a marked shortage in breeding cattle. Under the most favorable conditions, the demand remaining constant, it will take at least three years to increase the number of animals to the point where the supply will equal the demand. The steady increase of population and the growing export trade are also factors which will hold up the price. The cheap Western lands are a thing of the past and the future beef supply must be produced on high-priced lands with high-priced feeds. The present high prices must continue because they are only in proper proportion to the cost of production.

WM. McARTHUR.

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The Fight Against Hookworm

SOME time since an esteemed correspondent in Virginia called our attention to what she thought a swindle and a fraud on the people of her community, by traveling lecturers who with specimens of hookworms were exciting the fears of the nervous and ignorant by alarming statements with reference to this disease. She also stated that she understood that these men were offering to cure the disease for ten dollars for each case.

We at once wired the Rockefeller Institute and the Virginia State Department of Health, giving and asking information. In the meantime our subscriber wrote us another letter saying that the lecturer mentioned was a local physician who has now been appointed as an assistant in the Department of Health of Virginia, and was giving his whole attention to the work of ridding the state of the disease.

Our informant had been mistaken as to the character of the work, which is regular and in all respects good.

We are glad, however, that she made her complaint, as it brings us knowledge of the noble work which the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease is doing in Virginia in connection with the State Department of Health.

It is to be hoped that the same good work is going on in all regions where this dreadful but easily-prevented and readily-cured disease is prevalent. Local doctors are being educated to recognize and treat the disease. People in general are being awakened to a knowledge of its ravages and to the means of curing and preventing it. Pamphlets are being placed in the hands of teachers and pupils in the schools. Arrangements are made so that people can call on their local doctors and be examined for the disease without cost or by the expenditure of twenty-five or fifty cents. It is a broad educational campaign.

Our readers in infected regions are urged to put themselves in touch with local doctors who are aiding in this work. Hookworm is spread from polluted soil—soil polluted by human beings. In its first stage it is sometimes noticed as ground-itch, dew-itch, foot-itch, toe-itch, or other breakings-out usually on the feet of persons going barefooted. It can be easily cured, but people should not try to cure themselves or use patent medicines for it. The drug used is thymol, which must be given carefully and by a doctor who knows how. Traveling quacks should be shunned, and should be prosecuted when they violate the law.

The disease is a bad one. It makes millions of people miserable and poor. No man can do a better work for his neighborhood than to help stamp it out. And the thing to do first is to build outhouses, the lack of which causes so much of its spread.

Persons in the Southern states, wishing to get a boiled-down and authoritative statement of the nature of the disease, its prevention and treatment, can get a free pamphlet from the secretary of their state board of health. A post-card request sent to him at the capital city is all that is necessary. This pamphlet is designed particularly for use in schools, but it contains condensed information about the disease that is of interest to every one concerned about the public health.

* * *

Several papers and self-deluded people keep trying to make people believe there is no such thing as hydrophobia, and yet people bitten by mad dogs die every little while in awful agony. Kill stray prowling dogs and run no risks.

As pasturage grows shorter, cut that row of corn planted injudiciously near the pasture-lot fence. It will help take the place of grass, besides removing a lure that might tempt the cows into making a raid on the corn-field.

In planning the purchase of binder-twine it is well to remember that an advantage of manila over sisal is that the former, because of the greater length of fiber, permits of being drawn into a twine of greater smoothness and pliability. Also that a pound of manila twine has about six hundred and fifty feet, while the same amount of sisal is only about five hundred feet. Prices should even these things up.

Every idler is guilty.

Be the farmer your dreams would make you.

Hard work makes money. Care saves it and makes it go as far as possible.

Beauty may be skin deep, but good-road beauty has no deepness at all, either of dust in summer or mud in winter.

With full and complete preparations—plenty of bin-room and sacks and bags available—threshing will lose much of its hurry and drudgery.

While we are not an advocate of kid-glove farming, we see no reason why the farmer should not wear a pair of good, substantial gloves to keep from scarring his hands all up when at the rough work around the farm.

Go to the Microbe, Thou Mossback!

SOMETHING may be said in praise of any one or anything. Shakespeare asserts that the Prince of Darkness is a gentleman—and whether he is or not, he has the virtues of punctuality and industry. The devil is always on the spot and observes no union rules as to hours of work. So with the microbe. He is worthy of all praise because he keeps everlastingly at it. If the anthrax microbe has intelligence, he doubtless is very proud of the way he infects things, and spreads and plants his spores, and provides for the extinction of herds that pass over the infected ground after many days.

Bob Ingersoll once said that if he had his way, he would make good health contagious, instead of disease. This was a bright saying, the smartness of which depends on its absurdity. When we begin to know that good health is contagious, the utterance ceases to mean anything.

There may be no bodily microbe of good health, but there are many figurative ones. Go into any neighborhood where a high class of agriculture is practised, and you will find that some man, perhaps years ago, infected that soil with good farming by practising it. Where a specialty has made the farmers rich, it is more apt to be because they followed the good example of some innovator than because their location is especially favorable to it.

Be a microbe—a human microbe. Get infested with some good thing and let your neighborhood catch it from you. Good schools, good dairies, good tillage, good buildings, a good club—infect your neighbors with one of these and see the whole community "come down" with it.

* * *

A busted trust magnate took to agriculture because he knew more about the stock-watering business than anything else. He was very much surprised and chagrined when, after giving an old plug a hearty drink in the evening, he failed to find a spanking team of thoroughbreds in the stable the next morning.

Figure up what the "average" farmer loses by shocking and capping his small grain the usual way. Birds peck it off; wind, rain and hail beat off their heavy toll; while the intense heat withers and lightens the product. Mold very often plays havoc with it, too. Canvas caps cost very little when compared to the waste their use prevents.

Can We Be of Any Assistance?

IF you have doubts as to the best way to use the feed on hand or as to what would be the best thing to buy for the purpose of balancing your rations, for poultry, feed-yard, hog-house or dairy, we may be able to assist you in your dilemma. In the same manner, if you have problems in drainage, fertility, soil renewal or replanning the farm, we shall be glad to help if called upon. We have a great many very expert people in all lines connected with FARM AND FIRESIDE, and we are bold enough to believe that there are few farms where their counsel could not be used with profit. "It's up to you."

The Real Rate Fight Begins

WE DON'T hear so much about railway rates as we did a few weeks ago—and yet the situation calls for more intelligent vigilance on our part than then. For the real rate fight did not end with President Taft's suit against the rate-raisers and their compromise with him. Neither did it end with the passage of the rate bill in Congress and its signing by the President. In fact, with the passage of that law we enter upon the most critical stage of the railway-rate situation which we have ever seen, perhaps.

The law gives the Interstate Commerce Commission supervisory power over the raising of rates. Formerly rates might be raised at any time by the railways; now they must tell us about it beforehand. This is an advantage to railway-users, but it must not be forgotten that the railways are filing notices of hundreds of advances and that the commission can scarcely analyze all such proposals. The commission is swamped with the volume of these rate-filings. In a few months, if nothing is done, the advances will begin going into effect automatically without reference to their justice or injustice by reason of lapse of time without objections being filed against them.

Farmers sell in the world's markets at prices from which freight is deducted. They buy at prices to which freight is always added. Advanced rates make our living cost more and take from our ability to pay for it, and this is another way of saying "hard times." Farmers' organizations should watch carefully the notices of advances as filed. The next nine months will settle for many of us the question of hard times or good times for a long while.

OUT OF THE LETTER-BOX

EDITOR FARM AND FIRESIDE:—

The letter in your editorial columns of June 10th from Mr. Louis G. Beers would be laughable in the extreme were it not for the seriousness of the situation discussed. In the outset let it be understood I am no advocate of "trust-busting." I will give my remedy later on.

Mr. Beers asks: "Do you think the public could be served more economically?" Now we might ask Mr. Beers this question. With the trustification of all industries as we have it to-day and, as he says, with more economy of distribution, why is it that the consumers in most cases are poorer fed, poorer clothed and poorer sheltered than even a few years ago?

Space forbids me going into detail as to how the packers handle the situation as regards the farmer, but the point is this: The big packers have the territory in which meat is largely produced divided among themselves by what is known as a "gentlemen's agreement," forcing the producer from a certain territory to sell to a certain packer. This gives to the packers a uniform price, and no matter which of them buys, the swag is divided in the end.

Now as to economy—Mr. Beers wants to know if 13.66 per cent. is an unreasonable profit. That question has been discussed far and wide—what is a reasonable profit? Well, by the time Swift & Co. get their 13.66 per cent., and the Cudahys, Armours, Kingans and Morrisets get theirs, it doesn't look to me very much like being economically served. When one goes to buy a pound of meat to-day, he is led to believe some one is "getting his."

I haven't said anything in regard to the swag taken over by the railroads for their economy(?) of distribution. I am not going to say more except to clear the farmer of all blame, for those conditions, as we all know, are absolutely beyond his control. Mr. Beers, I am sure, is not in the stock-raising business, and if he wants his feathers clipped, I would advise him to start in at once.

As to the Review of Reviews, March, 1910, what it said in regard to this question cannot disprove what we see and actually experience all around us. And as for magazine proof, I can quote from at least half a dozen magazines that have stated the opposite of what was published in the Review of Reviews.

Now for my remedy in five words: Public ownership of the trusts.
J. ALBERT SMITH.
Ohio.



By Judson C. Welliver

CONGRESS has passed a postal savings bank bill, and in theory at least it represents a concession to the farmers. Maybe it does. It will be just as well, however, for us farmers to stand around a spell and see whether we are getting anything out of it, before we do much rejoicing.

I suppose everybody knows that the postal bank idea was old in most countries before it attracted attention in the United States. When the first postal savings bank bill was introduced in Congress, the postal savings system of European countries was firmly established and nobody would have questioned that postal banks were desirable. But that wasn't the point. The first man I recollect getting a rise out of a postal bank bill was Congressman Hitchcock, of Nebraska. That was about five years ago. Mr. Hitchcock introduced a bill to establish postal savings banks when he had been a congressman about fifteen minutes. He made a speech in favor of his bill when he had been a congressman about an hour and a half. There was great merriment over that speech.

Anybody could see, of course, that this man Hitchcock was just a plain, every-day Populist. The idea of postal savings banks! Whoever heard of such nonsense! So various old-line statesmen, of the school which never learns and never forgets anything, interrupted Mr. Hitchcock with joking remarks designed to develop all the humor of the occasion. They poked enough fun at Hitchcock to satisfy any ordinary new congressman for his entire career.

It happened, however, that Hitchcock was different. Despite that he came from Nebraska and had been a devoted supporter of Bryan, Hitchcock was a graduate of two or three of the best American universities and sundry German educational establishments. Besides that, he had been a newspaper man for some twenty years, accustomed to supporting what he thought was right merely because it was right and to waiting for the public to get around to seeing it his way.

Hitchcock's bill didn't attain to the distinction of a serious committee during that session. Next session he introduced it again, spoke on it again and got a much more respectful hearing. Then the Omaha district, convinced that it was pretty ridiculous to keep a man in Congress who had such funny notions, defeated Hitchcock.

Utterly lacking in sense of humor, Hitchcock went right on advocating postal savings banks, and after two years of retirement was returned to Congress with a general mandate to go as far as he liked. The Omaha district had been studying up on postal savings banks and was willing to keep a man in Congress who might look ridiculous to some folks because of advocating them.

The Funny Idea Attains Respectability

So Mr. Hitchcock and his funny idea broke into Congress again. Hitchcock lost no time demonstrating that he had the courage of his convictions, by introducing his bill anew. This time there was less disposition to make fun of it, and an increasing number of people took it seriously. So, in course of time, the campaign year of 1908 transpired and a marvelous thing happened. The Democratic party took up the idea of a guarantee of bank deposits, and the Republicans, by way of substitute, declared for postal savings banks. The Democrats said in their platform that while they were primarily for a guarantee of deposits, they wanted postal savings banks if the guarantee plan couldn't be carried out. And so it transpired that both the great parties were lined up for the utterly ludicrous idea that had caused Mr. Hitchcock to be laughed out of Congress just a short time before.

The Republicans carried the country and were promptly confronted with demands that they "make good." Now, Nelson W. Aldrich and Joseph G. Cannon hadn't figured that far ahead. They were strongly in favor of postal savings banks as an issue on which to carry an election, but, really, you know, were a trifle vague about the details of such legislation.

The truth was that Senator Aldrich had other fish to fry. He wanted to establish a central bank of issue. The senator, seeing finance through the eyes of big business, was anxious to establish, as the crowning work of his career of statecraft, the greatest bank in the world; a bank that should be more powerful than the Bank of England, the Bank of France or the Imperial German Bank; a bank that should weld together

in an indissoluble union the great political and business interests of this country. He had had a commission established, with himself as its chairman and its boss, to work out such a project.

Stick a pin right here while I indulge some observations about Senator Aldrich. Don't imagine that Senator Aldrich has horns and a long forked tail. Understand that Senator Aldrich honestly believes that it is good for the country to be governed by such as he. He is perfectly sincere in the idea that the country would go to the demnition bow-wows if a comparatively small group of people were not intrusted with control of its "great property interests." Senator Aldrich is just as sincere in his notion that, property being duly looked after, humanity will get about all it is entitled to, as Mahomet was in his belief that he was the sole prophet of the only true scheme of salvation.

Now, to bring Senator Aldrich and Mahomet and all of our modern and ancient Tories back to this project of establishing postal savings banks. Senator Aldrich was favorable to any postal bank scheme that would further his plan of a great central bank. He was opposed to any postal savings bank scheme that would not inure to the advantage of his ambitious project in centralizing financial control, and thereupon opened the great contest of wits which finally resulted in a sweeping victory for Aldrich, in the passage of the postal savings bank law.

How Aldrich Soothed the National Banks

For it must be understood that the measure just passed is the second greatest triumph of Senator Aldrich's career. The greatest was the Payne-Aldrich tariff bill.

When Senator Aldrich set about to establish a central bank, he realized, being a practical man, that he could not win if American banking was opposed to him. The bankers are too strong in the pockets and the confidence of the country. And at the very outset the bank of issue idea engages in a head-on collision with the hard, cold, uncomfortable fact that the national banks hold a vast amount of government bonds on which the rate of interest is very low, but which nevertheless are a good investment for national banks because they can be used as the basis for national bank circulation.

There are about two thirds of a billion of dollars' worth of national bonds which draw only two per cent. interest. Most of them are owned by national banks and were bought at a premium. They would be an exceedingly bad investment, in these times of six-per-cent. money on first-class real-estate mortgages, if it were not for the fact that a national bank holding them is privileged to issue circulation—that is national bank notes—for the full amount of the bonds and to loan this money at current interest rates, while at the same time drawing the two per cent. interest on the bonds.

Therefore, Senator Aldrich and other advocates of a central bank faced this situation: If they took the privilege of issuing notes away from national banks, they would deprive these bonds of their greatest element of value. The national banks, being about as human as the rest of us, could not be expected cheerfully to accept a project in currency reform that would cost them many millions of dollars in the depreciation of securities held by them. It has been carefully calculated that something like half the members of Congress are stockholders in national banks. Incidentally, they are also human beings and, therefore, not disposed to vote perfectly good money out of their own pockets. So that it was plain enough that if a central bank of issue were to be established it must not be established at the price of a serious loss to national banks.

Senator Aldrich and the Wall Street people who want a central bank were acute enough to realize this situation early. Per se they had small use for a postal savings system. But if the postal savings banks could be made the medium for gathering up a vast amount of the people's money, and if that money could then be invested in taking the two per cent. bonds off the hands of the banks in such fashion as to guard the banks against loss—why, the most powerful opposition to a central bank would have been removed. That is the whole idea back of the postal savings legislation

just passed. It is nothing more nor less than a clearing away of the underbrush, preparatory to establishing a great central bank. It is estimated that in three or four years two billion dollars, and maybe vastly more, will be deposited in the postal banks. That will not only take care of the two per cent. bonds, but it will provide a dominating proportion of the national savings account, to be administered by a central bank, whenever one shall be established, and made the custodian and guardian of the postal savings account.

Insurgents and Democrats Plug the Pipe-line

When the postal savings bank legislation was pending in the Senate, Senator Borah, Senator Cummins, Senator LaFollette, Senator Bristow and others pointed out that this was the obvious purpose in providing for investments of the postal savings money in government securities. Right or wrong, these gentlemen had their misgivings about the desirability of laying a cornerstone for a central bank in this way. They expressed very frankly the opinion that any central bank fathered by Mr. Aldrich would be a Wall Street Central Bank and that the proposed postal savings system would be no more nor less than a project in financial pipe-line engineering to pipe the country's savings into Wall Street for use in those various and devious enterprises of manipulation, floatation and aëration, in which Wall Street is so adept and at which it profits so handsomely at the expense of ordinary mortals unfamiliar with the science of high finance.

Consequent on these protests, the Senate inserted an amendment providing that postal savings funds should not be invested in securities drawing less than two and one fourth per cent. This was specifically designed to exclude the two per cent. bonds from being bought up with the postal savings funds. Other amendments along the same line, all designed to prevent the postal bank system from being made a handy adjunct in the organization of a great Wall Street central bank of issue, were inserted. They were adopted, in every case, on very close votes; insurgent Republicans, like Cummins, Dolliver, Clapp, Nelson, Borah, Bristow, Beveridge and others, voting with the Democrats, in each case made up a bare majority against the Aldrich-Hale-Administration forces.

But the course of a great piece of legislation through Congress is a long and devious one. President Taft and the leaders in the House of Representatives had small sympathy for the views of the Insurgent-Democratic combination which had controlled in the Senate. The House was directed to take out of the measure those provisions which in the Senate bill seemed to have made the legislation unavailable as a center-piece for a magnificent project to establish a central bank with which to finance the uncommon large and voracious enterprises of lower Manhattan. The House did so, and when its bill was passed it was thoroughly satisfactory to central bank advocates. And that is the bill which President Taft has signed and which is now the law of the land.

It is worth while for people who have misgivings about this legislation—and I am very frankly one of them—to recall that Senators Cummins, LaFollette and Bristow voted for the original Senate bill when it passed, but voted against the Senate acceptance of the House bill later on, and that two or three other senators, who have never been noted for sympathy with the Aldrich ideals in statesmanship, either were paired against the House bill or were unavoidably absent without pairs, but with the general understanding that if they had been present they would have been opposed to the measure.

In saying all this, I do not want to be understood as committing myself in opposition to a central bank. The great banks of England, of France, of Germany, of Italy, of Japan, have proved themselves powers for stability in business and finance and for the regulation and suppression of the tendency to dangerous speculation. Perhaps a central bank, properly organized, in this country, might be similarly useful. But the fact is, and it should not be overlooked, that there is a wide-spread apprehension that the sort of central bank which Senator Aldrich and his confrères favor would be too little of a government bank, too little of a people's bank, too little of a public interest bank and too much a financial clearing house for the great speculative interests which thrive on the watering of stocks and the exploiting of the public.

Farm-Land for Nothing—and Less

By Eugene Wood, Author of "Back Home," "Folks Back Home," etc.

TO GET away from where it isn't quite so cold is one thing; to settle yourself in a place where you'll feel reasonably contented and glad you made the move is quite a different thing.

The circulars advertising lands in the Sunny South aren't of as much help to you in making up your mind as you might think for all they confidently assert to you that the particular locality they celebrate is nothing short of a hunk chipped off the Garden of Eden. You know they get so interested in making the sale that they don't let a little insignificant thing like telling the truth interfere with it.

Right from the jump let me clear myself of suspicion. I wouldn't advise you to buy land in Fairhope, Alabama, which I now propose to write up. I think you'd be foolish to do it. Why should you buy land, for mercy's sake, when you can get it for nothing, and even less than that?

Fairhope is the only place in the country where a determined effort has been made to prove the truth of an oft-repeated statement: "The Single Tax will do it." To be sure, Fairhope is not a fair test of that because the state of Alabama and the County of Baldwin, and even a part of Fairhope itself believe in the private ownership of land and in a multiplicity of taxes, visible and invisible, tribute to the political government and also tribute to the industrial barons of steel and kerosene, of beef and biscuits, of tobacco and twine—of pretty nearly everything.

The Single Taxers don't believe in Landlordism. They've got the notion from somewhere that the three factors of production are Land, Labor and Capital (this, in contradistinction to others who have the notion that there is only one factor of production, Labor, and that those who will not let Labor function, except upon the payment of some kind of toll, are not factors so much as they are malefactors). Of the rewards to each of these three factors, the Single Taxers hold that Wages are all right and ought to be bigger. And the Interest of the money-lender and the Profits of the middleman are all right, too, though perhaps not quite so all right, but when it comes to Rent, why, that is the very dickens and all. That's what plays whaley with the country. That's what keeps the most of us with our noses held hard to the grindstone, toil we ever so effectively. And this Rent gets all of us who work for a living, whether we pay it out month by month or commute our payments into one lump when we buy our freedom. But you must carefully distinguish between what you pay for the use of improvements, which are the work of individual men's hands, and what you pay for the use of the ground itself, whether in a locality where nice people live or in a locality where a lot of folks pass by that likely will purchase your goods. As for land speculation, where you buy a lot for one thousand dollars and don't do anything but just sit tight, and pretty soon you sell it for two thousand dollars—That is why little children go hungry to school. Not Interest, not Profits. Rent is what keeps us poor.

There are other sets and sects who do not like it at all because those who work themselves to get a living have just a living, while those who work other people for a living have so much they really don't know how to spend it. These would also like to have the situation turned end for end, the same as the Single Taxers, but these other sets and sects rather anticipate some sort of trouble in the process of turning the situation end for end. Somehow they cannot just imagine J. Pierpont Morgan meekly reaching for his tin dinner-pail and shouldering his pick without a cross word out of him. A bell hung on the cat's neck would be of great advantage to the mice, they do not doubt, but how to hang the bell where it will do most good presents a kind of difficulty. They do not think the cat will stand for it. Abolishing the cat would be quite as easy.

But the Single Taxers find this the simplest thing on earth—pretty nearly. You all know what taxes are, I hope. Taxation is a venerable institution handed down to us from days of old, when knights were bold and barons held their sway, and it depends upon the fact that there are two kinds of people on earth: (1) Those who had sooner work than die and (2) those who had sooner die than work. A farmer belongs to the first class. It frets him to see the barn afire, and horses galloping through the crops, and men yelling and poking spears into him, and the children murdered on the front porch, and his wife dragged down the big road by the hair of her head. It annoys him terribly. But that's nuts and raisins to a knight. He likes it. Couldn't be more fun, he thinks, than to dress up in a suit of iron overalls so that the farmer's pitchfork can't faze him. And it pays, too. Pays well. An hour or two's scuffling brings him in as much flour and potatoes and side-meat and ham and cider and all such as it would take the farmer all season to make working hard every day. Knighting was a good paying trade.

But you've got to have judgment about it. If you aren't careful, you'll kill off your farmer, and then where'll you be? You'll have to work. No, no. And even if you're moderate and leave him enough to last him till spring, what guarantee have you got that some

other gang in iron overalls won't come along and skin him out of everything? Also, it begins to look like hard work to have to go out and fight every time the flour-barrel gets low. So a compromise is effected. Provided the party of the first part, the conquered farmer, will come across regularly with supplies, the party of the second part, the conqueror, will undertake not to burn his barn nor rob him beyond endurance, and not only that, the said party of the second part will agree to keep off all other robbers and barn-burners. But—Take off your hat when you talk to me, you pup—But if you hold out on me, understand, I'll take everything you've got and put you out on the road. Understand? Say, "Thank you, sir." Now git!

And that's the origin of taxation. It is from this thistle of Taxation that the Single Taxers are going to gather figs, and grapes from this thorn-bush. A tax on the value of the land, irrespective of improvements, would be all the tax there was, a Single Tax from which all governmental expenses would be paid. And that would knock land speculation higher than a kite, and vacant land held out of use would be thrown open, and everybody could employ himself who couldn't otherwise find a job, and, 'most before we knew it, we should all be as happy as clams at high tide. We could have the omelet and still not need to break eggs.

(I have never talked with Mr. J. Pierpont Morgan about it, but I shouldn't think he'd be any keener in favor of the Single Tax than he would be in favor of the proposition that he should take his dinner-pail in his hand and his pick upon his shoulder and forthwith get on the job.)

But though there must be now very nearly as many Single Taxers in the country as there were in 1887, some of them grew impatient of waiting for the day to come in which the whole United States should "see the cat" and the Single Tax be inaugurated in its full perfection. So they started up the Single Tax Colony at Fairhope, Alabama, about fifteen years ago.

It isn't the Single Tax pure and simple. It can't be in the midst of a crooked and perverse generation that still believes that Landlordism is a good thing. But there is this arrangement: You put in your application with Mr. E. B. Gaston to lease land of the Colony, he having some three thousand acres of it for you to choose from. He chalks your application up on the blackboard outside his office. If nobody overbids you for that parcel of ground—that has happened six times in fifteen years—and you pay half a year's rental in advance, you can go ahead with it the same as if you held it in fee simple. You can get farming land for from fifty cents an acre a year up to as high as a dol-



"It frets him to see . . . his wife dragged down the big road by the hair"

lar an acre a year. (I will say, in parenthesis, that this rental is not six per cent. of the valuation of land right next to Colony land and not a bit better soil.) If somebody holds the lease of the land and you want to buy him out, you dicker with him for the value of the improvements. But you pay so much a year to the Colony, depending on how far your place is from the big water-tank in the middle of the crossing of Fairhope Avenue and Section Street, which marks the commercial center of the town.

"But that's not land for nothing," you object.

Hold on a minute. When you get land you're supposed to pay taxes on it, aren't you? State, county and local. In Fairhope the yearly rental covers that. It's like this: Suppose you take up one hundred acres of land, paying fifty cents an acre for it. That's fifty dollars a year rental. It's nice level land, but there are a lot of pine stumps and old, blackened stobs that you'll have to burn out, and bully bonfires they make, too. You clear the land at a cost of about fifteen dollars an acre, and you get fence-posts for ten cents apiece, set in, and wire fence. You sink a well for excellent, pure, soft water, and that sets you back one hundred dollars or so, and you put up buildings and all, and stock it. And after so long a time the assessor comes along and takes his lower lip between his thumb and finger and says to himself: "I wonder how much this man will give up to the State of Alabama, the County of Baldwin and the Town of Fairhope sooner than he sold up for taxes and have his things thrown out in the middle of the road. Two hundred dollars? Hay?" And he puts that down in the book against you.

Any place else on earth you'd go at him with all your claws and teeth. "You robber of the world!" you'd yell at him. "Why, man alive, it ain't worth that! Will you gimme that much for it right now? Why, it's an outrage!" And you hitch up and go to the county-seat and swear your taxes off, 'way, 'way off, till a body'd think, to hear you talk, you didn't have a thing on earth but one old pair of patched, blue, denim pants.

But in Fairhope you'd take it very philosophically. "Dear me! As much as that?" you'd say. And if you were a "slick" schemer and something of a rascal you'd slip the assessor a piece of money to get him to stick it on a little more. I don't know that it's ever done, but I can see how it might be. Because every cent of

your taxation in excess of what you pay the Colony for rental the Colony pays back to you in cold cash. For instance: You owe the Colony fifty dollars a year for the rental of your one hundred acres. But you have so improved the place that you are assessed two hundred dollars a year taxes. You pay that. Then the Colony pays you one hundred and fifty dollars a year in real money and calls it square. And if that isn't getting land for less than nothing, I don't know what you would call it. In 1909, according to the Report of the Executive Council, the Colony received in rents \$3451.91 and paid out in taxes, less tax on unleased land, \$2072.60. There are some in the town that think this thing of paying back to the renter the excess of his taxes over his rental is not businesslike and not fair to the other fellows who haven't got so much money to invest. But the sufficient answer so far has been that it is according to the principles of the Single Tax and that it encourages investors to come here and settle, so that by and by the rents will rise, but that hardly ever happens.

The next thing is: What sort of land can you get for nothing a year and even less if you've got capital to put on improvements? Here is another opportunity for me to prove that I am not the gifted author of an advertising circular for agricultural lands in the Sunny South. If I were, I should say with that fellow up in Daphne, three miles from Fairhope, that "the soil is a rich, sandy loam" and that "all kinds of fruit can be successfully grown here." I should think he must have had to gulp hard when he wrote that. It is "sandy loam" all right, though, with the accent on the "sandy." As for the statement that "all kinds of fruit can be successfully grown here," if you will let me change that to read "some kinds of fruit can be successfully grown here," I will indorse it heartily. This isn't the North. Apples do not do well at all, nor cherries, nor plums. Peaches have all the enemies they have any place and then some. Driving through the back country you may see acres upon acres of peach-orchards blackened and dead. Table pears are attacked by blight, but sand-pears, excellent when canned, are plentiful and fruitful. Currants won't thrive, nor gooseberries, nor raspberries.

But strawberries are very fine and last from early March till August. And dewberries, the finest that ever blackened a man's mouth, are all over every place, and huckleberries, and such finely flavored mulberries as I never tasted elsewhere. The specialty hereabouts is the Satsuma orange, a sweet kind with a skin like a glove, and the sour orange makes the best sort of marmalade. There is talk of grape-fruit, and there are some few bananas. But there are figs till you can't rest, which you can choke down quite handily, whether they be raw or canned or preserved. Such grapes as Concord do not succeed, but nobody misses the Concord when there are the scuppernong sorts, very fine eating, good to make a wine like Rhine wine (this is a "dry" state) and yielding riotously, sometimes two bushels off one vine.

And the flowers! Gracious heavens, the flowers! I think Fairhope must hold the prize for fragrances. In February the yellow jasmine scents the air, and the sweet olive, and there is a mysterious odor afloat like a celestial sort of beeswax which your nose finally tracks to the white young tufts of the long-leaved pine; then comes the wild plum and the orange-blossom, two odors that make me so romantic I could write poetry; and then the umbrella-trees put out their lilac-tinted and lilac-scented blossoms, and the perfume fills all the air because the umbrella-tree makes a beautiful thick shade and grows to be big enough to sit under in about five years, and everybody's got 'em. The magnolia with its shining leaves and its creamy-white blossoms as big as a sugar-bowl all full of perfume, and the cape jasmine which smells like plum-pudding with brandy-sauce on it, and—But that's as far as I've got with Fairhope fragrance. Oh, of course, roses. All kinds of roses blooming all but two months in the year.

But you don't want to know about roses and fragrances and moonlit nights and mocking-birds singing their heads off. You want to know something about the land. Fairhope is the highest point on the Atlantic sea-board from the Highlands of the Navesink at New York Harbor's entrance to some point in Mexico, I forget where. As you get off the steamer and walk the long wharf, the water is very shallow, and you can wade out and wade out and not go over your head—and you look toward the town, you see the bluffs, perhaps fifty feet high, and notice that they are the color of a ripe tomato. This is clay, very fine-grained. It gets harder than Pharaoh's heart. It is true hard-pan. It underlies the top soil from a foot and a half to nothing at all. The top soil is mostly sand, but it gets loamier as you go



"So romantic I could write poetry"



"Somehow they cannot just imagine J. Pierpont Morgan . . . shouldering his pick"

back from the bay. There isn't a stone big enough to throw at a dog. There are grains of hard clay perhaps as big as a quinine-pill, which you might take for gravel. Back from the bay a mile or so the ground is level as a table, with here and there a very shallow "draw" which, down close to the edge of the bluff, grow into deep gulches like cañons on a small scale. A few tin cans here and there dispel the illusion, though.

They plow quite shallow, not more than four or five inches. That's so as not to turn up the hard-pan. Yet this clay when mixed with the sandy loam of the top soil makes a good crop-yield, so the natives say. I should think it might. Red soils, it is well known, have a recuperative power little inferior to black soils. The hard-pan holds soil-moisture well. After a six weeks' drought I scraped away four inches of the top in a garden and got earth damp enough to squeeze together in a lump. What the soil needed, I should say, was humus. They have been burning it off every spring, and there aren't nearly enough animals to replenish it. The wild pasturage is excellent for about three months in spring. After that they nibble the rest of the year the best they can, and you can hang your hat 'most any place on the poor creatures who wander wherever there is no barbed-wire fence. These are "piney woods" cows with udders very nearly as big as a boy's cap. They produce beef like the very best pure Para rubber for elasticity. But it is as easy as lying to raise three forage crops a year off the same piece of ground, and with the soiling system and ensilage it ought to be possible to increase very greatly the stable manure which the land needs, and so to grow Bermuda grass for pasturage, a grass that does beautifully here when it has half a chance.

There are few hogs, though back from the Colony, in where they have not forgotten or forgiven Appomattox, there are "razorbacks," far-famed for fleetness of foot. I am told that the way to learn if one of them is fat enough to kill is to hold it up by the ears; if the rest of the body overbalances the head, then it is as fat as it will ever get. This may not be a good recipe to go by, but I don't think people would deliberately deceive an earnest inquirer after truth.

Peanuts do well here, and sweet potatoes, and watermelons. I do not think that I should grow them and harvest them and "tote" them to market. They are all quick fatteners of pigs, a little corn added toward the last serving to firm the fat. Also the crop and the droppings of the hogs would help the soil. The velvet bean makes a prodigiously long vine here, and they tell me that if you turn chickens into the field, they will get fat as butter without other feed.

They use chemical fertilizers hereabouts, but mostly cotton-seed meal. But along that line what I should say the Fairhope land fairly "hollered" for was lime. If you belong to that school of agronomy which regards the earth as a test-tube into which you can put any chemical you like for a reaction, you will probably add the rubrical: "To correct acidity." That follows like a response to the litany. Whether the lime makes the soil fizz like a Seidlitz powder and acts like cooking-soda in a case of heart-burn, I won't say. A really high-class scientific person would probably screw up his nose and say: "Well, I don't know. I'm more inclined to think the lime performs the same mysterious function that it does in clearing turbid, cloudy waters, and that its action is less chemical and more mechanical, that it has to do with the top soil which is too sandy and with the clayey soil which is too dense and compact." And then he'd taste his mouth and look wise. If you want to say off that little rigmarole of yours about correcting the acidity, I don't mind, if it's any comfort to you. But the soil needs lime, and you can get the ground limestone rock from up the river for three dollars and fifty cents a ton.

Only, I don't want you poking fun at my qualifications as an agricultural expert. I've been observing quite a lot, and I know which end of the horse you put the hay in at.

As for cash crops, you can raise cotton for about three years yet. The boll-weevil won't arrive till then. It is good soil for both tobacco and cotton, but it takes lots and lots of children in the family to pick cotton. Their fingers are slimmer than a man's, and they don't have to stoop over. To do that for a long day, and for many days, kind of gets to

you. But cotton's a world-market crop. I shouldn't like that.

Fine country for potatoes, Irish and sweets. You dig your Irish potatoes in May and have the rest of the year for other crops. The sweet potatoes are the genuinely sweet kind, although you can grow what we get up North, the floury sort, called down here "nigger-chokers." Cabbages you plant in the late fall to grow all winter. Asparagus is on its native heath here. You can grow all sorts of garden-truck, rip 'em up when they get done and put in something else.

But, like enough, you'd be like the rest of 'em in Fairhope, too proud to peddle. The other day the morning boat over to Mobile carried potatoes in sacks; the evening boat back to Fairhope carried two of those same sacks of potatoes, plus the freight both ways and the commission merchant's profit. A clever stroke of business! You can raise fine water-melons here, and if you scheme it so your melons arrive at the same time that everybody else's do, you can get as much as two and one half cents apiece for them.

No, I'll tell you. If I were a trifle more of an agricultural expert than I said I was, if I were certain sure that in my individual instance the plow was mightier than the pen when it comes to buying shoes for the baby, I'd take up this land that I could get for nothing and then I'd put my head in my hand and think and think. And what I think I'd think would be that I'd rather not enrich the stockholders of transportation companies at my expense; that I'd rather not put my fingers into the crack of the door with commission merchants a-hold of the door-knob. I think I'd have a moving picture in my mind of hotel-keepers and boarding-house keepers hiring rigs and chasing up and down the country hereabouts, looking for chickens, begging for broilers and frantic for fryers. Because Fairhope is a combined winter and summer resort. In summer it is chock-a-block with Southerners, eager for the cool breezes which make blankets a plumb necessity every night of the year. In winter there are many Northerners who

come down to where it isn't quite so cold, and there will be many more now that there is a large and pretty inn, with a view through the pines of the sun setting in the bay, an inn with bathtubs and an excellent table. And all these people have mouths for chicken that it is so far impossible to fill. In a climate like this

where the coldest winter days are like raw March weather, if I didn't keep my incubators going and my broody hens and never sell an egg or anything bigger than a broiler, it would be a funny thing. In a climate where you can grow three forage crops a year off the same ground and where milk is nine cents a quart only when you pay for a dollar's worth in advance, and all the butter is from the North, it seems to me I'd keep cows, too. And, since hogs fed on cow-peas have such a delicate flavor as pork, I'd have a few for my own smoke-house, and if anybody begged me on bended knee to let them have a ham or so at my own price, I might give in.

And, I think, in about five years' time I'd have that soil in pretty fair condition with all that stable manure and hen-manure and hog-droppings. At that it might not be as good soil as what you can buy in Iowa for two hundred dollars an acre. But two hundred dollars an acre means twelve dollars an acre a year that must be put into the interest hole before I could get anything for myself. And two hundred dollars means quite a bunch of cows and hogs and chickens to the acre that I couldn't maybe get if all my money went for land, but that I could surely get if I took up land that costs nothing, and if I had capital enough to put on improvements that would make the tax rate higher than my rental—would cost me less than nothing.

And then look at the coal I'd save. I don't know that it has been estimated, the cost of coal per acre per year, but it must amount to something in weather that freezes up the cistern pump as tight as the late Russell Sage.

Fairhope looks like a good farming proposition to me. I don't see how a man could lose out on it, a man that knew how to build up the soil and not run through it.

A Swede entered a post-office in the Northwest and inquired:

"Bane any letters for me to-day?"

"What name, please?"

"Ay tank de name is on de letter."—Everybody's.



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Holding the Fort

By Pearl Franklin Godfrey

Illustrated By M. E. Grainger



LOOKING at it, you never would have supposed that it was a fort. As a rule, forts do not have snowy curtains (mended all over with tiniest stitches), nor potted geraniums on a sill within, nor a little face pressed wistfully against a shining window-pane. But this one had.

Maurice, who looked out, pretended to his pretty, young mother that he watched the snow-flakes as they came down. He did not let her know that he was guarding her while his father was away—that he was keeping a sharp lookout for the enemy.

He felt that they were trying to hide it from him because he was sick, and if they thought he knew it, they might be unhappy. So he had kept to himself the secret he had overheard that night when the fever was just coming on and he had been so restless. But he had pledged himself to be a loyal soldier, too—even though he was a little uncertain as to just how he should go about it.

They had been standing by his bed, father holding mother in his arms, very, very closely—just as they both held him. Mother had been crying.

"I am not afraid of anything else, dear," she had said, "but if he gets sick—I—I don't know what we shall do—"

Father had remained silent a long time before he answered.

"Little girl," he had said, kissing mother on her eyes and smoothing her hair ever so gently, "if he isn't better by morning, you know there's still the watch—we'll have the best advice there is."

Then he had caught his breath very sharply.

"Things can't hold out against me much longer," he had cried, "I'm bound to win. But it's going to be a hard, hard winter and I'm afraid we have a fight before us."

Then mother had breathed, "I'm not afraid—of that. I'll hold the fort, dear."

And father had kissed her, oh, so many times, and said, "My own brave little soldier. You'd make any man glad and proud to go out to fight. You'd make any man win."

"If only—our little boy won't get sick," mother had prayed, falling upon her knees beside the bed. And as father, kneeling there, too, held mother close—close—Maurice had drifted away into dreams.

He had a cheap toy fort with wooden soldiers and a cannon. That is how he knew what it meant. When father used to stay at home and write so much, they would divide the soldiers and have play fights, while mother looked on, over her mending.

But now father went away so early and came home so late, and his face was so thin and tired-looking—the fort and the soldiers were pushed away and forgotten.

Scraps of what he had heard that night came back to him. That about holding the fort was first and foremost in his memory. Then he had a dim recollection, as though he had dreamed it, of father fighting for something. He couldn't remember what it was father was fighting for, but each morning when he awoke in the gray dawn to see father and mother stealing softly about, trying not to awaken him, and mother's arms clinging to father's shiny coat as he kissed her again and again, he knew that father was going out to fight—and mother was afraid to see him go.

What if the enemy should GET father?

He could hardly resist the impulse to throw his arms about father's neck and entreat him not to go, when he leaned over the trundle-bed to kiss him good-by. But he remembered. He and mother must be soldiers. He would turn his face to the wall until he could stop his lips from quivering. Perhaps—

"Mother," he asked, after he had thought it all over, staring out at the kitchen window, from the chair in which he was propped amid blankets and pillows (they kept in the kitchen always now, for that was the only room where there was a fire), "mother, is the doctor a enemy?"

The doctor had been coming regularly since that night when father had talked about fighting, and each time after mother had seen him to the door she had come back, as she did just now, with red eyes and had busied herself on the other side of the room.

There was a curious catch in mother's voice as she replied.

"No, darling. What makes you think that? The doctor is a friend to us. He is going to make my little man well and strong so that he can run out in the snow and make snow-balls and snow-men."

Maurice considered. "I don't think I care to go out," he said gravely. "It—it is too cold," he added.

He had no idea of leaving the fort and his dear mother unprotected.

The doctor wasn't the enemy—who then?

Another thing that puzzled him, father had said, "There is still the watch." But the fine gold watch mother allowed him to hold was NOT there in mother's top drawer. He had gone to get it and had hurried to tell her.

"Yes, dear," she had said, "I—it must be that father took it—"

Perhaps father had taken it out to the fight—they didn't have any swords or pistols and he had often wondered what father did about that. For all that he carried was a big book full of lots and lots of writing.

And how was mother holding the fort? Maurice never doubted that she was holding it, even though he was unable to penetrate her secret by watching her. She never seemed to be watching for the enemy where he was most likely to appear—out through the windows.

She looked always at Maurice—or her work. She made the most things, these days, out of corn-meal. She liked it, too, for she never had anything else, unless it was a cup of tea, while Maurice had milk and potatoes, and sometimes mother made a jar of cookies, and he had all of them—mother did not care for them.

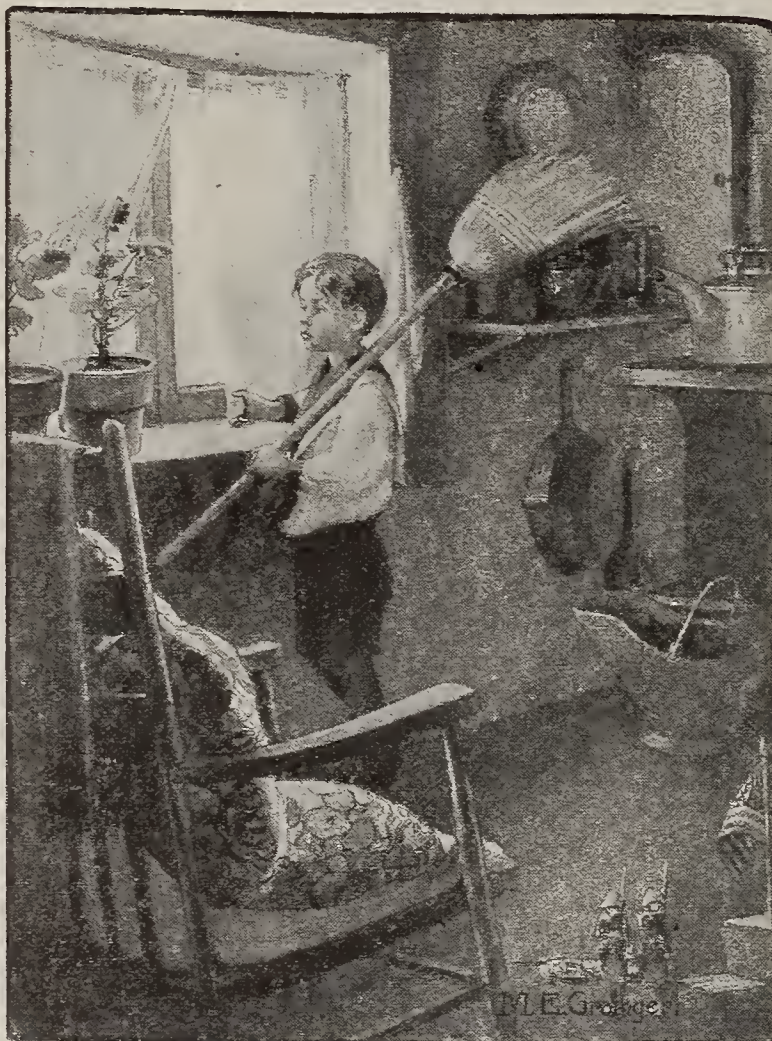
Then she worked so long at the old sewing-machine there by the stove—not on mending, for she did that at night, but on aprons and little dresses that she got in bundles and took away again, and once Maurice remembered, he had looked out from his little bed into the kitchen where mother sat sewing on these things by a candle, sewing, oh, so fast, when the door opened and father came in. She had jumped up so quickly and hidden what she was doing, and two red spots burned in her usually white cheeks. Father had not noticed, but Maurice had.

Besides the cooking and sewing and waiting on him, smoothing his pillows, giving him his medicine, reading to him or, if she worked, telling him stories, mother did ever so many other things. Her pretty hands were quite rough from scrubbing the floor and bringing in coal and wood for the little stove, and doing the washings. She was getting thin and white, like father.

When she went out with one of those bundles of sewing, she always left a good fire in the stove and fixed Maurice warm and comfortable, telling him to be a good boy and look at the picture-book; that she would hurry back.

Maurice waved to her until she was well out of sight and then he would slip down out of the chair and begin to drill.

Father had showed him how sentries paced up and



"Peering cautiously from behind the curtain . . . he would point his 'gun' and call 'halt!'"

down, with muskets on their shoulders, and although he had only a broom, he felt proud indeed as he held it stiffly and marched back and forth before the window—holding the fort while mother was away.

Now and then he would vary the monotony of the march by pretending that the enemy was attacking the fort.

Peering cautiously from behind the curtain, he would imagine some one stealing up behind the lilac-bush, coming nearer and nearer. Then he would point his "gun" and call "halt!" The enemy never halted and Maurice always fired, by saying "bang!" and imagined the enemy to instantly fall dead.

At first this had tired him. He had had all he could do to hold the fort in mother's absence. But he was getting so that he could march steadily, while the carnage outside the window was, to his imaginative brain, so great that he wondered sometimes that mother did not remark on the appearance of the yard, when she came in.

He felt quite strong this morning as he went on duty and was just going to discover an enemy behind the bush when he heard the door at the front of the cottage—the fort, that is—open and shut, and the sound of heavy footsteps.

At first he was afraid. Then he remembered. The fort! He must hold the fort while mother was away.

Up came his musket to his shoulder and when the door opened he had fired "bang!" before he recognized the jovial doctor, who had been a less-frequent visitor of late, and who stood now upon the threshold in utter bewilderment.

"Well, I do declare," he managed to gasp, after he had taken in the belligerent attitude of his young patient standing sturdily in the middle of the floor, "I thought you were a sick boy."

"I—I'm holdin' the fort," explained Maurice (he felt he could TALK to a man), "I thought you were a enemy."

"Thought—ha, ha! What's that? What do you mean, sonny? No enemy's going to come around HERE."

"Yes, he is," Maurice gravely assured the big man who lifted him off his feet and into his snug chair, where he leaned back, restfully. "This is a fort and my mother is holding it while my father goes out every day and fights. He is fighting for something, my father is. I can't just 'member what. But mother has to hold the fort and I have to help her."

The old doctor didn't seem surprised at all. He just looked, well, sort of queer around the eyes and mouth, and said, "Bless my soul," in a strange voice, and presently he blew his nose very hard. Maurice was watching him intently.

Then he saw her coming and said, "Don't tell mother. It would make her feel bad." He waved back cheerily to the slight figure plodding through the snow.

When she came in, her hands all red from holding the big bundle she brought back and keeping her shawl together, her blue eyes were all tears from the cold and her thin cheeks quite flushed. She stopped an instant and caught her breath as she saw the doctor sitting there, then put her bundle over on the machine and went to Maurice.

She was too cold to touch him, so she blew her kisses to him and then stood there rubbing her hands in a helpless sort of way.

The old doctor, from the moment she had appeared until she had put down her bundle and taken off the shawl, had not ceased staring at her, although he had risen and remained standing. Now he seemed to recollect and said crossly, a strange way to talk to mother, "Your hands are almost frozen. You must put them in snow."

Then he had gone out with the tin basin and scooped it full out of one of the huge, white drifts.

When he came in, he had put mother into the rocking-chair by the stove and had gone to taking off her shoes. There were holes in them that mother had tried to fix by putting brown paper inside, and now the papers fell out and mother's ears grew red—but the doctor did not mind. He proceeded to pack mother's feet—she had such pretty little feet—in the snow, too. Then he said brusquely, "You must have a hot drink. Have you any brandy in the house?"

"No," mother faltered.

"No—no wine?" he urged.

Mother said "No" again.

"Then you must have some coffee," the old doctor said gruffly, and before mother could stop him he was over to the cupboard and had thrown open the doors upon the tell-tale shelves.

"I—I don't care for coffee. I don't drink it," mother said in a strange voice. Then she gave a funny laugh and started to cry.

Maurice held her in his arms—they almost went around her—manfully restraining his own tears of sympathy and biting his lip to keep it from trembling. Father held her so—and father was not there.

Mother tried to stop crying, then she would laugh, and to stop laughing she would have to cry. And all the time little Maurice was hugging her tightly, saying, "Don't cry, dearest. Don't cry 'cause you're cold. I'll get you warm, dearest—"

The fussy old doctor was poking the warped lids off the stove with the broken poker and aimlessly shifting the battered tea-kettle hither and thither, putting tea to steep and saying, "Bless my soul," only it seemed to stick half-way like too big a swallow.

"Why, bless my soul," said he to Maurice, as he handed mother a cup of hot tea, and she, having stopped crying now, accepted it gratefully, "all your mother needs is something hot to warm her up. It's this cold weather. 'Nough to make any one nervous to go out in weather like this and get cold." He rattled on so while Maurice held the cup and saucer for his mother.

The doctor was drawing on his coat and gloves. "I have good news for you to-day," he said to mother, after studying her face anxiously for a moment. "Your boy is going to be as strong as a lion in a little while now. Spring is almost here and as soon as he can get out he'll begin to pick up."

"I—oh, I am so glad," said mother. Maurice thought she was going to cry again, but she didn't.

"I would like to see your husband—and tell him," said the doctor.

"He—he would probably be at the theater. He has been waiting to have his play read. They promised to read it, Mr. Marwood, that is—the actor, you know—"

The old doctor did know—better than he said.

It was earlier than usual when father came in that evening. Mother was just undoing the bundle of sewing to start to work. She had tucked Maurice in bed and kissed him and said a little prayer, thanking God that he would soon be well again. Then father came.

He didn't speak. He only smiled, or seemed to. It was the happy light in his face that made it seem so—and mother understood, for she flew into his outstretched arms and—well, they just hugged one another and—cried.

"My brave, little soldier," he said at last, "our struggle is over, but what could I have done without you?"

And Maurice did not know how long father and mother knelt by his side that memorable night.

He drew a deep breath of relief, then went to sleep. The fight was over. Mother (he was not going to tell that he had helped) had held the fort.

Health Notes

ONE of the best of all blood-purifiers and one that is also an agreeable summer drink is a decoction of sarsaparilla. To make this, slice about one fourth of a pound of sarsaparilla-root very thin and put it over the fire with two quarts of water. Keep it just simmering for four hours, then strain off the water and pound the root until it is smoothly mashed, return it to the same water and let it boil down to two pints. Strain it, let it cool, bottle and seal. One tablespoonful in a glass of cold water will prove a cooling and healthful drink in hot weather or, if preferred, hot water may be added and a little sugar to sweeten, and it may be used for a time in place of tea.

* * *

For cuts and scratches where the skin is rubbed off or any wounds of a similar kind, the leaves of geranium are most healing. Bruise one or two leaves and apply gently to the part, keeping it in place with a narrow strip of muslin, and the wound will be cicatrized in a very short time.

* * *

Sore lips, with which so many persons are frequently troubled, may be kept free from chaps and inflammation by a simple lip salve made with almond or olive oil and the best white wax. A few cents' worth of each will make a supply to last a long time. Melt the white wax over hot water, then gradually mix in the oil. Turn it into small pots or tin boxes and cover with tinfoil or waxed paper. The air and light must be kept out if it is made in a quantity to last some weeks. Equal parts of the oil and wax are required. This may be perfumed with a few drops of violet extract or white rose if desired.

* * *

When the face and neck are painfully sunburned a little oatmeal mixed with sweet milk and applied to the skin will be found soothing and bleaching, or milk alone will frequently prove efficacious, but buttermilk is better than sweet milk when used by itself. The juice of a lemon mixed in a cupful of sweet milk is also excellent for sunburn, but if used too often, may prove slightly irritating. A teaspoonful of sulphur mixed in a cupful of sweet milk is an old-time remedy for bleaching a sunburnt or red face. This should be dabbed over the affected parts liberally and left on until it dries, then wash it off gently with a little lukewarm water.

* * *

For tender feet dissolve one tablespoonful of carbonate of soda in half a pint of cold water and sponge the feet with the solution every night and morning.

* * *

Tender throats are apt to become sore in the summer as well as in cold weather and a simple remedy to keep on hand is the following: Mix one quarter of an ounce of saltpeter, finely pulverized, with three ounces of pure honey. Add vinegar to dilute sufficiently to use as a gargle, and gargle frequently.

* * *

To cure a cold in the head begin treatment as soon as the first symptoms are noticed. Dissolve one tablespoonful of powdered borax in one pint of hot water, then let it stand until lukewarm. Snuff some of this up the nostrils several times during the day and at night place a handkerchief saturated with spirits of camphor near the nostrils, so that the fumes may be inhaled while sleeping. Or if it is more convenient to use the borax dry during the day, sniff a pinch of this up the nostrils as often as required.

* * *

Lemons are possessed of almost untold medicinal virtues. Lemon-juice mixed with sugar until quite thick is a splendid remedy for a cough. A slice of lemon bound over a corn—and renewed every morning and night—will soon cure it.

When one feels weak and run down, without any symptoms of actual illness, a lemon eaten before breakfast every day for a week, with or without sugar, will often prove better than medicine.

* * *

To cure a felon bind the skin of an egg around the finger where the pain begins. It will have to be removed from time to time, as the contraction is so great it can scarcely be endured for long at a time, but if persevered in, it will soon make a cure.

* * *

For a run-round try holding the finger in water as hot as can be endured for as long as possible at one time. Repeat frequently until relieved.

* * *

To prevent the skin discoloring after a bruise, take a little dry starch or arrow-root, merely moisten it with cold water to make a thick paste and place it immediately on the injured part.

MARY FOSTER SNIDER.

Dressmaking Lesson

By Miss Gould

GENERALLY speaking, the need of a new wrapper is always with us and this is especially so during the summer days. The two wrappers illustrated on this page can both be made from the one ten-cent paper pattern and yet they are each entirely different garments as far as appearances go.

The pattern No. 1568, Tucked Wrapper in Two Styles, is cut in six sizes, for 32, 34, 36, 38, 40 and 42 inch bust measures. The pattern may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East Twenty-fourth street, New York City, and costs ten cents.

The pattern envelope contains seven pieces which are lettered as follows: The front V, the side back Y, the back T, the collar L, the belt X, the sleeve K and the arm-band J.

In cutting, place the edge of the collar marked by triple crosses (XXX) on a lengthwise fold of the material. Place the other parts of pattern with the line of three large round perforations in each lengthwise of the goods. Be sure that all the little perforations are marked and all the notches cut out before removing the pattern pieces from the material.

TO MAKE THE HIGH-NECK WRAPPER

Form the tucks in the fronts by creasing on lines of triangle perforations and stitch one half inch in from the edge of each crease. Turn the tucks backward, toward the shoulders, and press flat before joining shoulder seam.

Turn one-inch hems on the fronts by notches. Take up the hip darts by bringing the corresponding lines of small round perforations together and baste on these lines. After the wrapper has been tried on and correctly fitted, cut away the material in these darts, permitting only three-eighths-of-an-inch seam to remain.

Now join the backs, side backs and fronts according to notches. Pin first at the notches, then match the waist-lines which are indicated by square perforations and pin at this point. Bring the upper and the lower edges together and pin evenly. After you have pinned each seam at these

four points, pin in between them at rather close intervals before attempting to baste. The seams are so long and the pieces so heavy that they are apt to pull out of shape and stretch unless you are careful about pinning them well. Pin only one seam at a time and baste it before starting to pin another.

Form an inverted plait at each side of the center back below the waist, by bringing the long line of large round perforations over to meet the center back seam. Baste these plaits and press flat.

Join the collar to the neck by notch. Turn a three-inch hem at the lower edge by the lines of large round perforations. Baste as near the edge of the hem as possible and press the hem flat along the edge. Now turn in the upper edge of the hem three eighths of an inch and baste, being careful not to stretch the edge when basting.

Place the wrapper

on a table and pin up the hem. Where the little darts come at irregular intervals, be sure to have them basted down smoothly and pressed well before stitching the hem all around. If the material is wiry, it may be necessary to hem down these little darts by hand, making small stitches.

Sew buttons on the left side of the front along the line of large round perforations. Work buttonholes on the right side of front, bringing the front edge of each buttonhole to the line of large round perforations, and button the wrapper in front.

For the pattern of the wristband, cut off the armband along the line of small round perforations.

Close the inside seam of the sleeve by notch. Gather the sleeve at upper and lower edges between double crosses. Join the wristband to the lower edge of sleeve, matching seams in front.

When arranging the sleeve in the arms-eye, always hold the sleeve toward you. Bring the front seam in the sleeve to the notch in the front of the waist and place the notch in the top of the sleeve at the shoulder seam. Pin first at these two points, then pin plain part of sleeve smoothly in arms-eye.

Draw up the gathers closely to fit the remaining space, distribute the fullness evenly and pin securely before basting the sleeve to position, using plenty of pins.

Arrange the belt around the waist, lap the ends in front, bringing the large round perforations together, and button.

TO MAKE THE LOW-NECK WRAPPER—Omit the collar and cut out the wrapper square at the neck along the lines of small round perforations. Finish the neck edges and fronts of the wrapper with inch-wide bands of trimming.

Lap the fronts, matching the center lines of large round perforations, and fasten wrapper invisibly under the band.

Cut off the sleeve on the line of small round perforations and gather the sleeve at the lower edge. Join the armband to the elbow sleeve.

Omit belt and pass a ribbon around the waist, tying it at left side in a bow with long ends.

Three-eighths-of-an-inch seam is allowed on all edges of this pattern, except at the shoulder, where one-inch seam is allowed, designated by lines of small round perforations.

This additional inch is allowed as a safety outlet and may be cut off to the regular seam's width (three eighths of an inch) after the garment has been correctly fitted and stitched.

Miss Gould will be glad to answer any questions pertaining to home dressmaking which may perplex the readers of FARM AND FIRESIDE. She will send by return mail a personal letter to the writer if a stamped and self-addressed envelope is inclosed. Direct all letters to Miss Gould's Dressmaking Department, care of FARM AND FIRESIDE, 11 East Twenty-fourth street, New York City.



No. 1568—Tucked Wrapper in Two Styles
Pattern cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36 inch bust, nine and one half yards of twenty-seven-inch material, or seven and three fourths yards of thirty-six-inch material. The price of this pattern is ten cents



No. 1568—Showing how the wrapper may be made with low neck and short sleeves



Back view of No. 1568 showing a rolling collar and short sleeves

WISE WORDS A Physician on Food.

A physician out in Oregon has views about food. He says:

"I have always believed that the duty of the physician does not cease with treating the sick, but that we owe it to humanity to teach them how to protect their health especially by hygienic and dietetic laws.

"With such a feeling as to my duty I take great pleasure in saying to the public that in my own experience and also from personal observation I have found no food to equal Grape-Nuts and that I find there is almost no limit to the great benefit this food will bring when used in all cases of sickness and convalescence.

"It is my experience that no physical condition forbids the use of Grape-Nuts. To persons in health there is nothing so nourishing and acceptable to the stomach especially at breakfast to start the machinery of the human system on the day's work. In cases of indigestion I know that a complete breakfast can be made of Grape-Nuts and cream and I think it is necessary not to overload the stomach at the morning meal. I also know the great value of Grape-Nuts when the stomach is too weak to digest other food.

"This is written after an experience of more than 20 years treating all manner of chronic and acute diseases, and the letter is written voluntarily on my part without any request for it."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Fishing Outfit

Most popular outfit ever offered. Boys are crazy about it. 22 pieces, best quality, suitable for creeks, rivers or lakes. 2½ in. "Magic Minnow", life-like colors, nickel plated propeller spinner, 2 side Treble Hooks, 1 tail Treble Hook, 1 Furnished Line, near silk, 15 ft., enameled float, adjustable sinker, snelled hook; 1 Hank, 15 ft. best braided line; 3 Clincher Grooved Sinkers, put on or taken off in a second; 10 Carlisle Filled Point Ringed Hooks, assorted; 6 Carlisle Hooks, each tied to silk worm gut, assorted sizes. Send 3 two-cent stamps for set of Post Cards and instructions how to introduce The Agricultural Epitome and get Fishing Outfit. D. W. BEACH, Editor, Box 561, Spencer, Indiana

Boys!

Read This Offer

A FINE FIELDER'S GLOVE, well made and durable and of latest design. This glove is substantially fashioned and is all ready for use. Requires no breaking in and is well padded.

A STRONG MASK, made of heavy, bright steel wire, well padded and finished in the approved manner. An excellent protection to the face.

A CATCHER'S MITT of the latest model, well padded and serviceable. It is the same in design as those used in the big leagues and will wear well.

THE OFFICIAL BASE-BALL GUIDE. This guide is brimful of base-ball information. All the rules, records and pictures of the best known players. Everything that you want to know about base-ball.

A Gift to You

For full particulars, explaining how you can secure any or all of these fine Base-ball supplies, write at once to FARM AND FIRESIDE Springfield, Ohio

CHANGE

Quit Coffee and Got Well

A woman's coffee experience is interesting. "For two weeks at a time I have taken no food but skim milk, for solid food would ferment and cause such distress that I could hardly breathe at times, also excruciating pain and heart palpitation and all the time I was so nervous and restless.

"From childhood up I had been a coffee and tea drinker and for the past 20 years I have been trying different physicians but could get only temporary relief. Then I read an article telling how some one had been cured by leaving off coffee and drinking Postum and it seemed so pleasant just to read about good health I decided to try Postum in place of coffee.

"I made the change from coffee to Postum and such a change there is in me that I don't feel like the same person. We all found Postum delicious and like it better than coffee. My health now is wonderfully good.

"As soon as I made the shift from coffee to Postum I got better and now all of my troubles are gone. I am fleshy, my food assimilates, the pressure in the chest and palpitation are all gone, my bowels are regular, have no more stomach trouble and my headaches are gone. Remember I did not use medicines at all—just left off coffee and drank Postum steadily."

Read "The Road to Wellville," found in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Goin' Fishing?

Then you will want this fine three-piece bamboo rod, complete with reel, line, sinkers, float and six hooks

We have selected this fine, three-piece bamboo rod, click reel, oil silk line, sinkers, float and assortment of hooks, as

A Gift to You

We particularly want you to have this bait-casting rod, and, of course, you'll want the other supplies, especially when we explain that the complete outfit will be sent without one cent of expense to you.

For particulars how to obtain this outfit, write at once to

Farm and Fireside
SPRINGFIELD, OHIO



Household Department



Spiced Cantaloupe

TEN pounds of very ripe cantaloupe cut in one-inch squares, seven and one half pounds of sugar, one large cupful of vinegar, one half ounce of whole cloves (tied in a thin bag). Put the ingredients on the fire together and cook very slowly. If the syrup seems thin, remove the cantaloupe and boil the syrup until it thickens.

Feather Cake

CREAM two cupfuls of sugar with one half cupful of butter, add yolks of three eggs, one cupful of milk and three cupfuls of flour with two teaspoonfuls of baking-powder. Add beaten whites last and flavor with lemon. Bake in loaf or layers.

Cream Peach Pie

PREPARE and stew ripe peaches. Have pie-dish lined with good paste and fill with peaches. Lay upper crust on lightly, slightly buttering between the crusts. When the pie is baked, lift the cover and put in the following cream: One small cupful of rich milk heated, whites of two eggs whipped and stirred in the milk, one tablespoonful of sugar, one half teaspoonful of corn-starch wet with milk; boil three minutes. Let the cream get cold before putting it in the hot pie. Replace crust and set aside to cool.

Raspberry-Vinegar

TO EACH quart of raspberries allow one pound of granulated sugar. Mash the berries and sprinkle the sugar over them. Cover well and let stand until the next day. Put them in a thin linen bag and with the hands squeeze out the juice. To every pint of juice allow one pint of the best vinegar. Bottle and cork securely. It will be ready for use in a few days.

Frozen Peach-Custard

ONE pint of rich milk, one pint of cream (whipped), yolks of three eggs, one and one half cupfuls of sugar, one pint of fresh peaches cut into pieces—not too small. Beat the eggs and sugar well together. Heat the milk almost to the boiling-point and add it gradually to the beaten eggs and sugar. Return it to the custard-kettle and stir it constantly until it has slightly thickened, taking care that it does not curdle. When the custard is partly frozen (having stirred it in the usual way), add the whipped cream; stir a few minutes longer and then stir in the fruit. Put all into a mold and place in a fresh relay of ice and salt.

Fruit-Cobbler

FILL a wide-mouthed pitcher with alternate layers of sliced pineapple, orange and lemon, using one lemon and one orange to one small pineapple; over each layer sprinkle pounded ice and sugar to sweeten. Cover the pitcher, and let stand for one hour. Then add two tablespoonfuls of sugar and two tumblers of water, and stir until the sugar is dissolved. Fill the pitcher nearly full of pounded ice, pour in one cupful of raspberry-juice, and stir again. In serving, place a slice of each kind of fruit in each glass. This is a refreshing drink for a hot summer day.

Good Picnic Sandwiches

OLIVE SANDWICHES—Stone and chop fine two dozen large olives in which mix a small cupful of mayonnaise dressing. Butter thin slices of Graham or brown bread, spread with the filling and make into sandwiches. Pile them together compactly, trim off the crust with a sharp knife and cut into halves.

BAKED-BEAN SANDWICHES—To a cupful of mashed baked beans, add a teaspoonful of chopped parsley, a teaspoonful of onion-juice and a little prepared mustard. Season to taste with salt and white pepper. Butter white bread on the loaf, cut into thin slices and spread with the filling.

A delicious and substantial picnic sandwich is made with Hamburg steak. Boil round steak in a little slightly-salted water until done, but not long enough to make it stringy, and let it cool. Then mince it fine, and mix it with some chopped pickle, a little lemon-juice, and salt and pepper to taste. Spread it between thin slices of buttered brown bread, press together, and trim neatly. Do not have the sandwiches too small if masculine palates are to be catered to.

Hints By the Way

By Mary Foster Snider

If new tinware is well rubbed all over with fresh lard and thoroughly heated in the oven, it will never rust.

When saucepans are bright and you wish to keep them so, smear a little grease over the outside part before putting them over the fire. This will prevent them becoming black and grimy, and if well washed afterward in good hot soapsuds, they will keep as bright as new.

The silver will keep bright and save much laborious cleaning and polishing if once a week it is immersed in sour milk and left there for twenty minutes or longer. Wash it in very hot water and polish as quickly as possible. Soft pieces of old flannellet are excellent to use in wiping and polishing it.

If the hands perspire during hot weather, rinse them in a little clear water to which a few drops of tincture of myrrh has been added, then wipe them dry and rub them together until every bit of moisture has disappeared. Dust them with fine oatmeal or with a little boracic acid powder, rub them well together again and wipe with a towel. Do this as often as necessary and much discomfort will be avoided.

Table-cloths and other articles should, of course, always be mended before being laundered. The darn should be begun half an inch from the hole on every side, and if the article is worn thin, it may be commenced from a larger distance around.

The bleeding from a cut may be stopped frequently by an application of finely-powdered rice or flour. If the wound is very severe, it will effectually lessen the flow of blood until other applications or assistance can be procured.

Enamelware that has been burned or discolored may be restored by vigorous rubbing with salt and vinegar.

In hot weather, when ironing is so difficult and unpleasant, a great deal of it can be satisfactorily accomplished with the clothes-wringer. All flat pieces, pillow-slips, towels, sheets, aprons, underwear and stockings, if carefully smoothed out or folded neatly, as required, may be put through the wringer with tight rollers, and made smooth enough for all ordinary uses.

Equal parts of ammonia and turpentine well shaken together will remove paint from clothing. Put it on the place where the paint is and allow it to soak in for five or ten minutes, repeat two or three times and the paint may be brushed off in flakes.

If the inside edge of a pan or kettle used in boiling milk is rubbed with butter, the contents will not boil over.

To remove stains from white flannel, which is not always easily accomplished, rub into the soiled parts equal quantities of yolks of egg and glycerin mixed together, allow it to soak for half an hour or so before the article is carefully washed in the usual way. This is worth remembering when baby flannels must be cared for.

Borax added to the water in which dish-cloths are washed will help to keep them white and sweet. It is also very useful in cleaning enameled saucepans and sinks when they have become stained.

If the oven is too hot, place a small basin of cold water in it. The door may then be kept shut without danger of burning the bread or cake or whatever is being baked.

To keep flatirons from rusting, have a lump of yellow beeswax tied in a piece of muslin and rub the hot irons all over with this before putting them away. Set them up on end when not in use. If they have already become rusted, rub them first on powdered bath-brick, then on salt, then rub them with the beeswax in the muslin bag, after which rub them again with the salt.

To drive away ants buy five cents' worth of tartar emetic and divide it into three saucers, mixed with sugar, and place where the ants are troublesome. This will eradicate them. While this is not a deadly poison, still it is wise to keep it away from small children.

To Remove Grass-Stains

GRASS-STAINS on white linen can be removed by saturating the spots in kerosene, rolling the garment up a few moments and then washing it out in hot water (as hot as the hands can stand) with plenty of good soap. After this treatment all traces of the grass-stains will have disappeared.

Good Fly-Paper

MELT six ounces of rosin in a tin cup, add a rounding tablespoonful of lard or enough to make the mixture like very thick molasses. When cold spread upon stiff paper with a flat piece of wood or a knife. Heat the knife before using. Rub the screen door in your kitchen with kerosene and it will keep out the flies that generally stick on the outside. They do not like the odor of kerosene and a cloth saturated with it and placed in a room will bring the flies to the floor.

To Mend Table-Linen

QUITE a large hole in table-linen may be beautifully mended on the sewing-machine. Baste a piece of rather stiff paper neatly under the worn or torn place (note-paper will do) and with rather fine thread sew over it in straight rows, having the rows quite close together. After the hole is filled with rows across one way, go over it in the same manner cross-wise, so that the stitching really has the effect of very fine darning. The paper may then be torn away. If it does not come off easily, let it alone, as it will soak off in the wash. A hole carefully mended in this way is immensely superior to the darning usually done on table-linen by hand and, unless looked for after the cloth has been laundered, it will never be seen.

Old-Time Blackberry-Drinks

PERHAPS no other berry contains such good medicinal qualities as the blackberry. In the form of cordials or syrup, it makes an invaluable tonic for delicate children and feeble aged persons and is generally effective in cases of prostration and illness.

BLACKBERRY-SYRUP—Two or three tablespoonfuls of this syrup, taken in a glass of cold water (or without water—just as preferred), makes a splendid tonic that is especially efficacious in summer complaints.

Fill a large-mouthed jar with alternate layers of fine ripe berries and granulated sugar, allowing three fourths of a pound of sugar to each pound of the fruit. Pour over the berries good brandy in the proportion of a gill of the liquor to each pound of fruit. Fill to the top of the jar in this way, seal tightly and at the end of four months the sugar and fruit-juice, with the brandy, will have made a good syrup for medicinal purposes.

GRANDMOTHER'S BLACKBERRY-WINE—This is an old reliable recipe which our grandmothers always used. The wine was made for medicinal purposes and the people of those days were never known to be without it.

Put the fruit in an uncovered vessel having a tap fitted near the bottom, and pour into the vessel just enough boiling water to cover the berries well. Bruise the fruit thoroughly and let it stand (covered with cheese-cloth to keep out dust and insects) until a crust forms over the top, which will be in three or four days. Then draw off the liquid into another vessel, and to every gallon add one pound of sugar. Stir it well, turn it into a clean cask and let it stand to work for a week or ten days. The cask must be kept full of the liquor all the time, and must, therefore, be examined from time to time and more berry-juice added if necessary. When fermentation ceases, bung the cask and in about nine months bottle the wine and seal securely. A gill of port wine may be added to each quart bottle if desired.

BLACKBERRY-CORDIAL—This is excellent for children and delicate persons in hot weather.

Simmer together for thirty minutes two quarts of blackberry-juice, one pound of loaf sugar, four grated nutmegs, one fourth of an ounce each of allspice and cloves (ground), and half an ounce of ground cinnamon. Keep the vessel tightly covered to prevent evaporation. When done, strain through folded cheese-cloth and let get cold, then add one pint of the best brandy, bottle and seal securely.



Our Young Folks



The Story of the Flowers

By Alice V. Burrell

EVER and ever so long ago, oh, years and years before your grandfather was born or even your grandfather's grandfather was born, there dwelt in all the woods a queer little people that we will call by the name of fairies. These olden-time fairies loved boys and girls dearly and would do everything in their power to make their little earth-friends happy, for, although the children never could see them, the good little fairies were always close at hand. And if ever a fairy heard a little girl say that she wished the rain would stop so that she could go to a picnic, that fairy would fly away quickly to the Rain Fairy and ask him to please "turn off" the rain. And as soon as the rain stopped the Sun Fairy would drop golden banners of sunlight all the way from the sun to the earth and then the little girl would be happy again. So you see what good little fairies they really were.

Now in that time, so long ago, there were no flowers on the earth; think of it! But the girls and boys did not miss them, as you and I should, because, you see, they had no idea what a flower looked like. And the fairies did not send the flowers because they had never heard an earth-child wish for one. So the little people went on quite happily playing with their dolls and kites, for girls and boys always had dolls and kites to play with.

One summer evening (I think it was Midsummer Eve) the fairies gave a splendid ball in the woods. All the fairies from far and near were invited to come and dance and make merry, so you may be sure that not one invitation was refused, for next best to helping little earth-children the fairies loved to dance on a smooth velvet carpet of grass. The little clearing in the woods was softly lighted by the fireflies, who felt honored because they were allowed to shine in such a fine company. And there was music in plenty, too, for all the bees and crickets and locusts and grasshoppers for miles and miles around came and played their little fiddles and cornets. Old Mr. Bullfrog was there, too, with his big bass drum. Each fairy appeared in a gorgeous gown made especially for the ball. I have heard that the Cloud Fairy wore a beautiful frock colored just like the clouds at sunrise—all soft pink and pearly gray and pale blue. The Moon Fairy was dressed in the softest, most shimmering gown of silver that you can think of. There were frocks of pure white, of gleaming yellow and green like the sea when the sun shines on it; there were soft

blues and pinks and violets and, oh, every beautiful color that you ever heard of and perhaps some that you have never seen.

At last the Queen Fairy came. There was a note from a tiny bugle; all the fairies dropped to their knees and their dear Queen Fairy entered in an acorn chariot. Oh, how lovely she was and how tiny, not bigger than your little finger. She wore a wonderful robe that seemed to be made of golden sunbeams and silvery moonbeams intermingled; on her head was a crown of the most beautiful mother-of-pearl and she carried a little golden scepter. Her ladies-in-waiting escorted her to the throne which was placed on a grassy knoll under an old oak tree and at her royal signal the dancing commenced.

Ah, if you could have been there and could have seen them! Such an entrancing sight! The dainty little fairy-folk stepping through their quaint little measures with their pink and blue and green and yellow draperies floating gracefully about them! The fireflies flitting in and about and above them; the bees and the grasshoppers and the crickets chirping and fiddling, and the Queen Fairy looking graciously on from her throne.

They danced and danced until the first streaks of dawn

appeared in the east—the hour at which all fairies must vanish. But before they went away the Queen Fairy raised her scepter and in fairy language said to them:

"My good and loyal fairies, if there be one among you who does not love the earth-children, let him pay no heed to what I shall say. Is there such?"

"No! No!" came the chorus of fairy voices.

"Very well then. You all know that it is contrary to the laws of our kingdom to allow an earth-child to see us. But you all know, too, how much these dear children love beautiful things. And so, my kind-hearted fairies, I would propose that you each leave your ball gown here in this little dell, so that when the children come to play to-morrow they may find them and exclaim over their loveliness."

Of course, all the fairies readily agreed, doffed their splendid gowns and hurried away. But the wonderful part of it was that when the children came the next day to play in the dell, the gowns of the fairies were not there, but in their place had sprung up—what do you suppose? Why, flowers of every shape and hue—all the beautiful little wood-flowers that we love so well—hairbells, anemones, violets, forget-me-nots, arbutus and many others. And that is how the flowers were born.



A Little Fish Story
By Epos B. Congstock

We went fishing, Bess and I,
For minnows at the dam
And took some jelly-cake for lunch
With sandwiches of ham

We were provided with a pail
Of water to revive

The little fish we meant to catch
And take them home alive.

And too, we had a can of earth
Containing angle worms

That wiggled when we shook them out
And gave us both the squirms.

Then in a hundred different ways
In vain we undertook

To get a wretched writhing worm
To crawl upon our hook.

We placed the point against his nose
And tapped him on the tail

We threatened him with life and limb
But all to no avail.

So we sat down to eat our lunch
And figured out a plan

But ended little better off
Than when we first began.

And in despair we took that can
And threw it, worms and all.

Into the pool where it was deep
Below the water-fall.

We stayed just long enough to see
The bubbles and the foam

And then we gathered up our things
And Bess and I went home.

THE LETTER-BOX

DEAR COUSIN SALLY:—I can't begin to tell you how pleased I was when I received the book which you sent me for my work. I have read it and think it is fine. Thank you very much for it.

I must tell you that I got my club-button and I think it is awfully pretty. I am going to try and be a loyal member and keep up with the monthly contests.

Wishing our club success.

Lovingly,
LILLIE M. SAUNDERS,
R. F. D. 7, Hedgeville, West Virginia.

DEAR COUSIN SALLY:—You can't imagine how pleased I was with the book that you sent me. I didn't expect anything, as that was the first time I had tried for a prize. I kept the stamp that was on the wrapper, for I am trying to get a stamp collection.

Your cousin,
ESTELLE BARCOCK,
Kruger, Wisconsin.

DEAR COUSIN SALLY:—You cannot imagine my surprise and pleasure when I found in our mail-box a beautiful picture from Cousin Sally. You are so liberal in giving so many beautiful prizes and I am going to try in all the contests, for I think they are splendid.

We received FARM AND FIRESIDE last evening and I read "Our Page" before supper. I think we have accomplished so much in the two years we have been together and I look forward with joy to the time when Cousin Sally's Club will be the greatest children's club in this country.

I want to congratulate the author of "The Violet." I think it is a dandy poem.

I wonder if any of the cousins saw the comet? One morning we got up at 3:30 to look at it. We had a fine view. It was very pretty. The tail appeared to be about twelve feet long.

Your happy cousin,
ANGELYN ALEXANDER,
R. F. D. 3, Chase City, Virginia.

DEAR COUSIN SALLY:—I received the lovely letter you sent me and also my club-button, and I thank you very much for them. I think the club motto is the finest one that you could have. I am very glad I joined your club and I mean to be a loyal member. I would be very glad to correspond with some of my cousins.

Your loving cousin,
FLORENCE WATERS,
Willow, New York.

COUSIN SALLY'S CLUB

IF YOU haven't joined Cousin Sally's Club, you have missed something really worth while. Join to-day and find out what it means to be a member of a big, splendid club like this one.

You want to become fine men and women, don't you? You want to have good times; you want to help others whose path of life is not so smooth as yours; you want to be a little helper in the home and out of it; why, of course you do. Well, then, join Cousin Sally's Club and see what a big help it will be to you. This isn't a goody-good club, oh, no indeed, for we believe in good, wholesome fun and plenty of it, only we don't believe in having all the fun ourselves and never sharing it.

I once heard a story—and a true one—about a little girl whose parents were very poor, and there were times when there was not a morsel of food in the house. To them a loaf of bread was a great luxury.

Well, one day this little girl was eating her scant portion of bread and milk when she heard a strange whining sound coming from the kitchen door. She looked around quickly to see what it was, and there on the back steps stood the most wretched-looking dog the little girl had ever seen. He was simply dying of starvation; his bones stuck out through his skin, and his tongue, dry and parched, hung from his mouth. He was too weak to bark, but stood there at the door, whining piteously. Now this little girl had a kind, generous heart, and when she saw the dog, she burst into tears and snatching up her saucer of bread and milk she put it down in front of the starved animal. Of course, she had to go to bed without any supper, and perhaps she would not get any more bread until the next evening, when her daddy had made more money to pay for it. But she did not think of herself, for, after all, even though she was hungry, she was not starving to death, and then, too, she had a great love for dumb animals. Do you think that dog was grateful? Well, indeed he was! He just stood there and licked her little hand, and his big, solemn eyes seemed to say, "I am so grateful."

That's what I call doing good! That's what I call unselfishness! That's what I call a sacrifice, and I wish we all could do a little bit of good the way this little girl did. You can if you join Cousin Sally's Club. The button costs only five cents. All boys and girls seventeen years and under may join. In writing, state name, age and address, and address Cousin Sally's Club, care FARM AND FIRESIDE, 11 East 24th Street, New York City.

BOOKS —FOR— GIRLS



READ THIS LIST

Adventures of a Brownie.....Mullock

Alice's Adventures in Wonderland.....

.....Carroll

Andersen's Fairy Tales.....Andersen

Arabian Nights.....

Aunt Diana.....Rosa N. Carey

Averil.....Rosa N. Carey

Bad Little Hannah.....L. T. Meade

Bailliff's Maid, The.....E. Marlitt

Bella's Blue Book.....

Black Beauty.....Anna Sewall

Book of Golden Deeds.....Yonge

Brownie of Sanford.....Carrie L. May

Bunch of Cherries.....L. T. Meade

Cuckoo Clock.....Mrs. Molesworth

Daddy's Girl.....L. T. Meade

Deb and the Duchess.....L. T. Meade

Dog of Flanders.....Ouida

Erl Queen.....N. Von Eschstruth

Esther.....Rosa N. Carey

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The Soul's Anchor

By Rev. Charles F. Weedon

THE Christian life is represented sometimes by a battle, sometimes a pilgrimage, here a Marathon, there a voyage. In a voyage there are varying conditions of fair days and foul weather, a time to set every stitch of canvas and a time to cast anchor and wait.

Do you see that ship yonder? She is riding peacefully upon the waves. Last night she was hid from the shore in the darkness. Last night there was a storm. The wind and rain beat against her shrouds and deck; the strong eddies and swift undercurrents swirled and rushed along her keel; the billows, angered by the hurricane, lashed and pounded her hull. But all through the night she swung safely at her place and when at daybreak anxious eyes were turned seaward the ship was still there, her masts and her spars glistening in the sunlight. What has held her? Why had not the fearful storm swept her upon the rocks? If you will look at her cut-water you will see a cable running down beneath the waves, reaching far down to the shanks and flukes of the anchor. That big anchor, gripping the bottom, has held to her moorings through the wild and dark night.

The tempest of sin darkens around every life. Storms are the common lot. We are shut away from the world to battle with the powers of darkness—Moses in Midian, John in the deserts, Paul in Arabia, Peter in prison, Christ in the wilderness. Every man is driven to a lee shore many times in his life. There are days, months and years when men must wait and work. Hope is the one thing that saves, an anchor to the soul.

Who are those without hope? The apostle speaks of Ephesus, a colonial Greek city of Asia Minor. The great temple of Diana was there. It was a city of image worship, priestcraft and slavery. Every man lived his day and that was the end. Be merry, for to-morrow we die. Where there is no hope similar conditions obtain to-day. Along the Barbary coast the wife is bargained for, the maiden has no choice. After the feastings, in which she has no share, the future husband, drawing his knife, presses its point upon her forehead that she may know that he is to be master, she the slave. In civilization of to-day there are those in the slavery of wrong-doing. They are indifferent, forgetful, reckless about their souls, often skeptical about any future at all, sailing without a port, without an anchor, and when the stress of trouble or sorrow comes suddenly, they are driven to despair.

Sunshine and Shadow

By Fannie Medbury Pendleton

A SUNNY life, that is the desire of all hearts. To some it is given to bask in the sunshine made by others; to many comes the necessity to make their own days bright, even to fight away the shadows that threaten and the storm clouds that lower. But if there were no dark days, would we appreciate the sunny ones? If there were no earth, with its troubles and trials, would there be any need of a high heaven? The contrast comes that we may properly appreciate and enjoy.

A sunny disposition is as a beacon in a dark hour. It radiates light and joy. It does far more good in this world than all the fear of a stern hereafter. It throws its beams afar, and just as surely as they are sent forth, so they are reflected upon the pathway of the sender. There is no sunshine lost in this old world of ours. For every little ray there is some hungry heart waiting to be made more cheerful, some darkened life that needs just that little gleam.

But there is a value, likewise, in the shadow—a value that is understood by all those upon whose pathway it has fallen. Is it not true that, when one stands in the sun, his eyes are dazzled so that it is hard to see far beyond himself? And is it not also true that it takes, a dark day when the sun is less bright to give us sight into the mysteries that lie beyond? The Valley of the Shadow is the Valley of Vision after all, and Pain is the greatest teacher that humanity will ever know. It is when his heavy hand

Carlyle says: "Let a night be never so dark or tempestuous, yet the hope of the morning is a mercy and a light. How sick then they who are hopeless. Everlastingness is the sting and poison of all miseries. Heaven is a day that shall never see any approaches of night." There are some people who would pluck hope that rises immortal out of the human heart and over the portals of the future they would inscribe the words that arch the entrance to Dante's inferno, "all hope abandon, ye who enter here." Contrast this with those who have fled for refuge to lay hold of the hope set before them which is an anchor to the soul. Why disturb that hope which has been a blessing to countless men and women all through the centuries when no adequate substitute is given? In the great Chelsea fire among the throng hurrying away from the flames was a woman carrying a family Bible. That book had become a life and hope to her. Her earthly chattels were burned, but that book anchored her soul to God.

Having no hope? Why? Because without God—what does it mean to be without anything? Without crops—means gnawing hunger; without raiment—that would make us cold and ashamed; without money—that would worry us; without friends—that would make us lonely and forlorn; without hope—that would drive us insane; without God—that would mean everything worth living for lost! Without Christ—a ship without a compass, a voyage without a Pilot, a soul without a Savior.

You have a picture hanging upon your walls. It is a scene of an angry sea and leaping waves. In the midst of the storm is a rock, a cross is imbedded in the rock and a figure is seen clinging with both hands to the arms of the cross.

"Simply to thy cross I cling."

Every man is driven to that some time in his life. Calvary as an anchor to the soul.

Another representation, still more suggestive and more Christian, I saw in a beautiful home in Scotland. This one was in marble. There is the same sweeping billow and perilous sea, the same stone cross and rock, but the woman now is holding to the cross with one hand and reaching down with the other to rescue a sinking form. Service as an anchor to the soul. Whenever you are helping others, you are never in despair. Let us be thoughtful to stretch out our hand and draw others to the shelter, safety, forgiveness and love of the Savior.

From Bakery to Farm

Soda crackers are a long time on the road to the country store, and from there to the country home. But

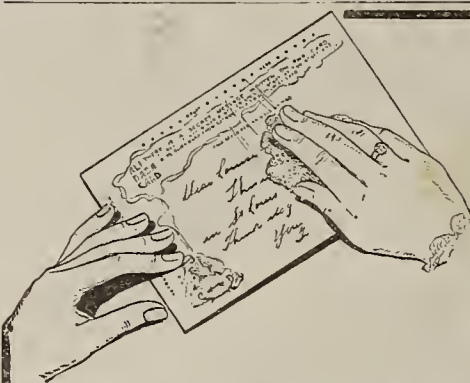
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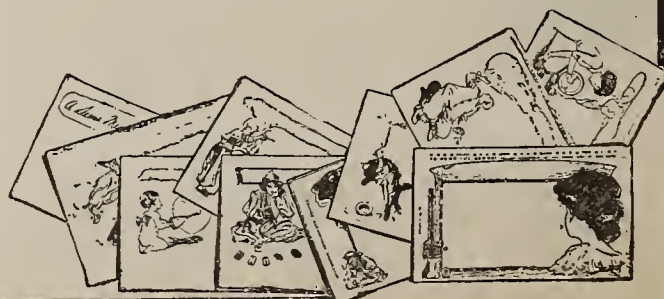
are put up in assortments of ten different subjects, handsomely printed, with a supply of the wonderful invisible ink, special pen for writing the messages, and full directions for use.

If you wish one of these sets you must send your order to us at once, as the demand promises to exceed our supply. When we send the first cards we will tell you how you can secure other supplies.

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THE NATIONAL FARM PAPER



ESTABLISHED
1877

AUGUST 10
1910



A Visit With the Editor

IF we all went into the same kind of farming it would be a calamity. I am not sitting down to this chat with you for the purpose of urging you all to go into dairying. Some regions may not be adapted to it. But here's what dairying has done for one neighborhood in Wisconsin.

These homes are on the road from Mt. Horeb to Blue Mounds—a typical dairy neighborhood. It is not the best string of farm-houses in Wisconsin, by any means; but I think you will agree with me that this would be the loveliest, richest and mightiest nation the world ever saw, if our country roads everywhere passed by homes as spacious, as artistic and as good to look upon and live in.

This story in pictures claims one rather unusual virtue—it is honest. We took every house on the north side of the road between the two towns. We didn't leave out any because it "wouldn't make a good picture." What we wanted was a good picture of that whole string of dwellings with as many big red barns as we could get the camera to embrace. Some of them are occupied by tenants—and though the owners may have moved away but a single year, the places already begin to show signs of that disease which we all recognize as soon as a case is presented to us and which may well be called "rented-farm leprosy." It comes from leaving land in the possession of families to whom it is not and never can be Home with a capital H. Things are sagging and falling apart. The paint is scaling off. Paint is the petting which the home-owner gives to the thing which is his own. The man who pays hard, round, stubborn, reluctant dollars for the use of a thing, with a contract that he can be driven away from it next March or a year from that time or five years, even, is not likely to feel much like investing any of the dollars remaining in decorating the abandoned pet of another.

I tell you, people, the greatest problem of the future of America is landlordism—it is the greatest problem even now.

But most of these pictures places are real homes occupied by their owners. Sometimes we read the query: "Does dairying pay?" Well, here's a region—and there are thousands of them in the country—where it has made possible homes like these. Twenty years ago this region was a grain country—and its fertility was falling off. Had they kept up the old-fashioned grain-farming until now, these homes would not be in existence. Most of these farms contain from one hundred and sixty to two hundred and twenty acres. The Brigham place has several hundred acres, but only one hundred of plow-land.

It is not a rich region, as land goes in Iowa, or Illinois—that is, the land has not that splendid and inexhaustible fertility which made poor farming profitable in those states for so many years. It is just good land, that's all—and it is richer, I believe, than any equal number of Illinois or Iowa acres outside the dairying regions which have been farmed as long as this locality.

And these dairy farms between Mt. Horeb and Blue Mounds are not model dairies at all. Few of them have silos, and not one has a pure-bred herd. Only one man has made individual tests of his cows. It is a neighborhood

of good, industrious, thrifty, prosperous dairymen, who have a lot to learn and who don't by any means carry all the learning they have into practice.

What farmer does?

The theory of scientific farming is now worked out to the degree where farmers can safely follow it implicitly; but there is no theory which is so hard to follow. Rain, wind, soil, the germination of plants—a thousand things buffet our ship off its course. There is a course, however, which in the long run is the right one. Science has given us that. We are in better condition

to make a successful voyage, knowing what the true course is, than before it was worked out. And year by year the farmer who knows it and strives to follow it will come closer to the line of travel which he has mapped out.

Because he has it mapped out, you see.

That you might have the truth, the whole truth and nothing but the truth, we took the picture of the house of William Erbe, just in process of building on the site of the old house. You can see that it is to be a worthy fellow of its neighbors.

The only picture given which is not on this Road of Beautiful Farms is that of the foundation of the barn of C. C. Lubke of Middleton—only a few miles farther east. This is interesting for several reasons. One reason is the fact that it is of reinforced concrete and that the barn to the roof is to be of the same materials.

The most interesting thing about it is, I think, that it has been made by the owner of an eighty-acre farm out of the proceeds of that farm. When eighty acres, well managed, will bring forth buildings like this, why carry the burden of a larger farm? Why send the boys and the husbands of the girls to town because "there isn't land enough?" Why despise the small farm as unworthy of the efforts of a family? Why not divide up the land, as the French do, and intensify agriculture as population increases?

Why let a state like Iowa decrease in population?

Such a thing is a reproach to our social order.

* * *

Are you thinking of moving South "where it isn't quite so cold?" A good many of our readers are, we know, because they have written us, asking information and advice on the

matter. These folks will be particularly interested in an article we have secured, for early publication, from Mr. A. N. St. Cyr—a Southerner himself, with a long, broad and deep knowledge of the real South as distinguished from the South of the land companies' prospectuses. Our Southern readers, too, will find his estimate of the chances for Northern immigrants to be mighty interesting reading.

Here's something new—the story of a knight errant of orchardry. Mr. N. T. Frame, chairman of the committee on markets and transportation of the West Virginia Horticultural Society, had some things he wanted to say to FARM AND FIRESIDE fruit-growers about their marketing problems. He has shaped his ideas into story form. Every one who enjoys a fable with a hard kernel of fact in it will appreciate the "Adventures of Sir Hubert," beginning this issue.

Robert L. L. L.



Home of Wm. Hines, Mt. Horeb



Home of A. Luhman, Mt. Horeb



Home of Thosten Thompson, Mt. Horeb, R. D. 4



Home of Justus Heiser, Mt. Horeb, R. D. 4



Home of Robert Bonner, Mt. Horeb, R. D. 4



Home of Enos Williams, Mt. Horeb, R. D. 4



Home Wm. Erbe is Building, Mt. Horeb, R. D. 4



Home of Robt. Helmstine, Blue Mounds



Home of Chas. I. Brigham, Blue Mounds



Chas. I. Brigham's Barn



Foundation for C. C. Lubke's barn, Middleton



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True Stories of Abandoned Farms

An Irish Weaver in Kentucky

SOME time during the early fifties an Irishman came to this country and located in the western part of Kentucky near the Cumberland River, purchasing an old worn-out farm for a mere song. The land was grown up in briars, and gullied six feet deep in places.

This man had been a weaver in the old country and knew practically nothing of farming. But he was observant and had keen foresight in all kinds of business pertaining to farming. He began by dividing the farm into fields as nearly square and equal as possible, containing from twenty to thirty acres. He then commenced cutting the bushes and briars, and with a yoke of oxen (he had no other team) dragged the brush and filled the gullies with it. He cultivated one field and put all the manure he could get on that one and then hauled leaves from the woods to poor points and gullies.

By breaking deep and cultivating as well as he knew he made a tolerable crop of corn and tobacco. After he had removed these he sowed the land to wheat, and during the following winter seeded to grass and clover. The year following he managed another field the same way, and continued until he had worked over the whole farm, being careful to watch all the gullies and keep them filled. By the time he got the last field under tillage, the first field, which had been in clover and grass two or three years, was ready to be cultivated again. He rotated crops in this way all his life, raising tobacco as his chief crop, with wheat and clover close seconds.

As soon as he had saved enough he bought up the neighbors' spare colts and calves, fed them all his hay, straw and fodder in the winter, fattened them on grass in the summer and sold them. It was only a few years until he had the best producing farm in the county. Besides manuring, he turned under green crops and limed his land, working all the time to increase the humus in his soil. He used practically no commercial fertilizer.

He has been dead for twelve years, but the farm, which he left to his eldest son, stands as a living monument to his thrift and energy. As I write this I can see from my window the fine wheat, hay and pasture fields, all above the average, and I also can see fields that have been worn out and thrown away since then—just as good land that lacked some one to nurse and tend it right. This man was wont to say that "A farm is just like a bank account. If you keep drawing and never putting any back, some day you will find you have nothing to draw from." I believe myself that it is a sin for a man to wear out his land when it is just as easy to build it up as to wear it out, and I think that God will not hold him guiltless who destroys something unnecessarily, when God intended him to beautify rather than destroy.

Any one can do what this man did by rotating their crops as he did—tobacco or corn, followed by wheat in the fall and that seeded down to clover and grass. This man commenced with a capital of about three hundred dollars and when he died he was worth between two and three hundred thousand, all made honestly from his farm and stock feeding.

I do not think many boys would leave the farm for the city if they had the practical example set before them that I have had. For in my estimation any one can buy a small farm with small capital and build it up until it will produce as well as the best, if they will make a study of farming, read the best farm papers and take their counsel—I am doing it myself.

CHAS. K. RICH.

Dulaney, Kentucky.

Lost Land in Maryland

NEAR me is a farm which was abandoned because no one could make enough of a crop on it to pay to work it. In 1907 a man purchased this farm for one hundred and fifty dollars, there being eighty acres of cleared land on it. That fall he plowed his four fields of twenty acres each. After this he broadcasted three hundred pounds of South Carolina dissolved bone.

He then seeded to rye and soy beans, letting these stand until the spring of 1908. As soon as he could get on the land he plowed all four fields, turning the rye and soy beans down. He then put one hundred pounds of nitrate of soda and three hundred pounds of dissolved bone on this.

In field No. 1 he planted corn. In field No. 2 he put cow-peas. No. 3 was seeded to rye, while No. 4 was seeded to oats. In June, 1908, he cut his oats and then disked the No. 4 oat-field and seeded to alfalfa. With this was put five hundred pounds of lime to the acre. On field No. 3 the rye was plowed down twelve inches deep, and being ripe when plowed under did not need reseeding, but grew from the ripe seed. When the rye was plowed down he put on a heavy coat of manure and disked it in. On his No. 2 field he cut the cow-peas, making excellent feed for his stock, and then disked this field and seeded to alfalfa with five hundred pounds of lime to the acre.

He then had his fields No. 2 and 4 in alfalfa, while



Wheat on the Irishman's Farm, June, 1910—Yields Twenty to Thirty Bushels an Acre and Stands Breast High on a Man Over Six Feet Tall

fields No. 1 and 3 were in corn and rye. In the fall of 1908 he cut his No. 1 field of corn, disked in a heavy coat of manure and seeded to wheat. With this wheat was put three hundred pounds of dissolved bone. This field made seven barrels of corn to the acre, while the wheat made ten bushels to the acre. In the spring of 1909 he seeded his No. 3 rye-field to corn and broke up the alfalfa on No. 2 and seeded to oats.

This year he has one field in corn, one in wheat, another in alfalfa and a fourth in pasture. He expects twenty barrels of corn an acre, and forty bushels of wheat. He gets four tons of alfalfa to the acre regularly.

This is his estimate of the cost of improving the farm: Cost of farm, \$150; tools, \$800; fertilizers, \$150; seed, \$30; labor, \$300; total, \$1430. By the end of this year he figures he will have sold produce to a total value of \$7500, on the basis of present prices. That will mean a profit of \$6070 in a little over three years.

Oakville, Maryland.

J. W. HAYDEN.



Cattle in Clover, Same Farm—Every Pasture Has Some Woodland for Shelter in the Heat of the Day

An Indiana Success

THIS is the history of forty-seven acres formerly owned by an old woman with a grown son and daughter. All of them were naturally intelligent, but, having become addicted to the morphine habit, were incapacitated for business. They either cultivated poorly the twenty acres of cleared land or rented to others who cared for nothing but the returns.

The fences eventually rotted down, the forest encroached upon the fields and even selected some of the most fertile spots and began to reforest. In the course of a few years this farm became so run down that it was offered for six hundred dollars. My father came here about that time with money and property to the amount of about four hundred dollars, bought forty acres of timber adjoining the run-down farm and afterward traded for this, assuming a mortgage of four hundred dollars drawing about eighteen per cent. interest, being in a building association.

Eight years ago he moved onto this farm, not having cleared any of the other land, and sowed clover-seed in the rye sown the fall before. He took the stumps and grubs out of other patches and planted them to corn, potatoes, cow-peas, etc., following with rye and clover, scattering manure thinly over as much of the poorest land as it would cover, thus furnishing food to start the young plants.

On a small field of light clay the cockle-burs were standing thickly from the last year's crop, but they were not more than eight inches high. This field has since produced forty bushels of corn. On other parts where the land was a loam and overgrown with elders the burs grew six feet tall where not choked by the elders.

Now, not one bush of cockle-burs can be found on the farm, the forest has been compelled to recede within its proper bounds and the elders are being exterminated. The stones are kept cleaned from the surface and used to stop washes, the plow and mower have no stumps or bushes to contend with and the land is becoming better each year by being kept in clover and alfalfa as much as possible, while cow-peas are grown on the poorer places.

My father keeps dairy cows to consume what is produced on the farm and also buys feed-stuffs of various kinds. This feeds the cows and the cows feed the pigs, and both contribute to the fertility of the soil.

He has cleared brush and grape-vines from a jungle on a terrace and has planted a young orchard of apples, pears, plums, cherries and prunes there, besides an orchard of plums exclusively, and many peaches and small fruits. The barn has been rebuilt. This has all been accomplished without hiring help to amount to ten dollars, and yet he finds time to read farm papers, attend farmers' institutes and other educational gatherings, and owes no man a dollar to-day.

G. F. B.

"All Worked Early and Late"

THE farm I have in mind used to be one of the best in our town. There was a fine house and a good gambrel-roofed barn, the land was excellently farmed, and everything was kept up well. But when the owner died he left the farm to his widow,

to be divided at her death among their six grown children, and it proved a disastrous arrangement.

All the children had homes of their own, except one. He moved onto the farm and eked out a living, but was very careful not to drive a post or nail on a shingle for fear it would benefit the others when his mother died. Finally, after the fences were all down and the roofs like sieves, he gave it up and moved to town. Burdocks grew by the side of the highway (that was before the law was so strict about the highway) so that one had to drive carefully or the horse would bring home a crop of a mammoth variety of burdocks, and the sumacs would scrape the carriage-top as you drove.

[CONCLUDED ON PAGE 5]

When the Horse is Sick

What to Do When Veterinarians Fail You—By David Buffum

NEXT to the treatment for the different vices and equine short comings, one of the first things horse-owners usually want to know about is the treatment of horses when ailing. For, unfortunately, horses are more liable to sickness and accident than any of our domestic animals and often, in such cases, a skilled veterinary physician is too distant to be called in.

I wish to state, in taking up this subject, that I am not a veterinary physician and the few remedies that I shall point out are simply those that I have found useful in the treatment of those ailments that are of most frequent occurrence and which, as a rule, require immediate attention. A great many of my readers are doubtless unable, in many instances, to secure the services of a good veterinarian. With me, the inability to secure such services has existed practically all my life—or, at least, all of it that has been spent in the country, which includes by far the greater part. For, as a rule, it is only in our larger cities that veterinarians, in the true sense of the word, are to be found. There are so-called veterinarians everywhere, but they are, for the most part, ignorant men,—of all human ills, the ignoramus who, by sheer bluff and imposition on the credulity of others, sets himself up as a veterinary practitioner, is one of the worst.

Perhaps a little light on the qualifications of these gentlemen and the basis of their claim as "doctors" may be of interest. They are of two kinds. The first, as a rule, were coachmen or grooms in the first place, and having learned by experience the remedies and treatment for one or two common ailments, set up, on the strength of this meager knowledge, as general practitioners—in which rôle, of course, they are fakers, pure and simple.

One man that I knew of this type, an Irishman, had the recipe for a blister ointment, which he kept a profound secret, and which—especially in the treatment of spavins and bony enlargements—was by far the best that I ever used. He had once been, he told me, groom for a well-known veterinary physician in the old country, from whom he learned the recipe. Now this blister ointment was the only remedy that he knew how to make or how to use; and if he had confined himself solely to making and selling it, he would have been of some use in the world. But, flushed with his success with this one thing, he must needs hang out his shingle as a general practitioner; and the damage that, for many years, he was constantly doing in this line far more than offset the good that he accomplished with his ointment.

Another man, a Yankee farmer, had learned from his father how to castrate colts and in this operation he became very skilful and successful, so that his services were frequently sought at long distances from his home. Such success was too much for him; it turned his head and he set up, as indicated by the sign-board over his door, as "veterinary physician and surgeon." But, though naturally a good horseman, he had no knowledge of the drugs that he used—and, like all ignorant practitioners, he used them pretty freely. I knew of several horses whose deaths were undoubtedly due to his ministrations, and the wonder is that there were not more.

Veterinarians Made While You Wait

"Doctors" of this particular kind are not now quite as plentiful as they used to be, owing to the popular demand of these days that a doctor should have a "certificate." And so a class of veterinary "doctors" has sprung up who are every whit as ignorant as the older type—and possibly even worse in practice, as they cannot boast even of some specialty in which they are proficient—but who, nevertheless, claim to be educated men and always have their certificates framed and hung up in their offices. These certificates are from institutions that no one ever heard of, and in just what way they were obtained I am unable to say, except that they surely did not cost very much in either time or money. The owner of one of them, with a candor temporarily induced by had whisky, once told me that he obtained it by attending a course of ten lectures which cost him one dollar each, and that he paid the lecturer five dollars more for the certificate. Was that all? Yesh, that wush all. And I have no doubt

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that most of them were obtained in this or some similar way.

Now between these miserable fakers and the really trained and educated veterinary physician the gulf is very wide indeed, so wide, in fact, that they are not to be measured by the same scale of comparison. And there is no danger of mistaking the one for the other; they neither look, act nor talk alike. The fakers exist because the regulars cannot make a living from the practice they could pick up in a country town; and thus a great many farmers who need the services of a skilled veterinarian are unable to secure them.

My advice to all who have sick horses is: Send for a good veterinary physician if such a one is available. If not, do not fall back upon the faker, but do the best you can yourself. By the use of a little common sense you can, in all probability, do better than he can. And, in any event, you are not likely to do worse—and you will, at least, be saved his fee.

Liberal Applications of Common Sense

The first thing to remember in home treatment is that horses are subject to the same disorders that afflict the human race. If, therefore, you can correctly diagnose the disease your horse is suffering from and know what remedy is used for a human being in like case, apply it to your horse, using from five to eight times the quantity.

Colic is an ailment that almost every horse-owner is confronted with sooner or later. There is never any trouble in recognizing the symptoms. First, let me tell you what *not* to do. Do not give whisky, oil nor any kind of a purge—the things that are most frequently given in such cases. The trouble is caused by sour, fermented food in the stomach and the gases it generates; and neither whisky nor cathartic has the slightest tendency to correct this. Use your common sense always and, before applying any remedy, stop to think of its natural effect.

Bicarbonate of soda, or common saleratus—a substance that every householder is pretty likely to have on hand—is a corrective for acid conditions and this, as the simplest remedy and one that has a direct effect upon the cause of the trouble, should be the first tried. Mix a half teacupful—or, in severe cases, rather more—with a pint of water and give the horse and repeat every fifteen minutes. In a great many cases—probably more than half—this will relieve the trouble and no other medicine will be needed.

When this does not relieve, however, give a dose of the following: One part aromatic spirits of ammonia, two parts spirits of chloroform. Mix.

Give the horse about two or three ounces of this mixture in a pint of slightly-warm water and, if necessary, repeat in twenty minutes and continue until relieved. This remedy very seldom fails to effect a cure, and, although I have not had much trouble of this sort among my horses, I have for many years, kept a bottle of the mixture on hand ready for emergencies.

I should add that country horses, owing to the more natural conditions under which they are kept, are not only less subject to colic than city horses, but generally yield more readily to treatment. The city horse, that has been long kept up in stable and fed heavily on grain, is not so easily cured.

Worms are generally found in horses that are in rather poor condition. Nature, always a good doctor, has provided a first-class remedy—green food—and if a horse has a run in a good pasture in summer and is carried through the winter in good shape, he is not likely to be troubled with worms. If it is necessary, however, to give some treatment in the season when green food is not to be had, the following remedies are good: Keep a lump of rock salt always in the manger and supplement it for a few days by giving a tablespoonful of fine salt night and morning in the feed. This will sometimes effect a complete cure in a short time.

Worm-Killers

Sulphur is also a good thing, and a little of it mixed with the feed for a few days often effects a cure.

Tobacco seems to be the most effective cure of all, though I generally prefer giving the other remedies a trial first. A teaspoonful of either smoking or chewing tobacco, rubbed fine and given in the feed

night and morning for a few days is about the right dose.

When a horse becomes lame, the first thing to do is to locate correctly the lameness. Often, especially at first, there is little or no swelling. But there is always heat in the injured part and a careful examination will generally find it. If the horse is lame forward the trouble is much more likely to be below the knee than above it—maybe in the back tendon or ankle or foot. It is very common, when the seat of the trouble is not readily found, to ascribe it to the shoulder; but as the trouble is much more apt to be lower down, the most careful examination should be made before coming to this conclusion.

There are many liniments on the market and some of them are very good; but plain, hot water applied persistently and followed by gentle rubbing is the best treatment. It is of little use to do this hastily; the water should be sopped on liberally with a soft cloth and the treatment continued for, say, fifteen or twenty minutes and then the part rubbed with the hands until perfectly dry. This should be done at least twice a day.

When the lameness is in the foot, it is not so easy to discover, but the injured foot will be a little hotter than the other. If the lameness is caused by a bruise, the best treatment is soaking in hot water, and the horse should be kept off the hard road.

If the horse gets a nail in his foot—and almost every horse does, sooner or later—pull it out and immediately wash the hole carefully with hot water, followed by dioxogen—and be sure to wash clear to the bottom. This last is important, as otherwise suppuration may follow. Then pack the hole with sterilized cotton. If the horse does not go lame, no further treatment is needed, but if he does, the process should be repeated.

Relieving Stocked-Up Legs

If the horse's hind legs stock up from standing too much in the stable, the deprivation of some of his more solid grain (especially corn) and the substitution of a liberal ration of bran will generally relieve the difficulty. An occasional dose of Glauber salts will do the same thing; but the bran ration is to be preferred—and in all ordinary cases is sufficient.

It occasionally happens that a horse gets hurt and that when the inflammation and lameness have subsided, an "indurated" swelling still remains. For such cases I have found the following the best of all remedies: Tincture of aconite root, three ounces; tincture of opium, three ounces; spirits of camphor, three ounces; iodide of potash (in fine powder), four drams. Mix.

Shake thoroughly before using; rub in thoroughly with the hand three times a day and always after using the horse. In treating swellings of this kind, you must remember that you are dealing with a condition that has become chronic and that a more or less long-continued treatment is necessary.

This mixture is also an excellent liniment.

First, have the harness fit properly; then keep the galled places clean and treat them with some one of the various gall cures that are for sale on the market. These are intended to cure while the horse is working and, if used according to directions, will do their work. There are several kinds that are good and seem to work equally well.

If in any way the horse gets cut or wounded, wash the wound perfectly clean with warm water and dioxogen; then, if necessary, sew it up and protect it in some way, so the horse will not bite it. Then cover it with sterilized cotton and change the dressing frequently. Liniments are of no use; the secret of a speedy cure is to keep the wound perfectly clean.

The few remedies I have here pointed out will cover, I think, most of the emergencies that, at one time or another, are sure to arise wherever horses are kept. I shall not take up the matter of treatment for chronic diseases and structural unsoundnesses—as founder, heaves, ringbone, spavin, etc. Animals having these unsoundnesses can often be made very useful, and a study of their treatment is not without interest; still, the best way, when practicable, is to sell them and let the doctoring be done by some one else.

I have used some other remedies than those here mentioned, but I think it is not necessary to take them up, partly because I do not like to recommend the use of drugs, and partly because the older I grow, the less medicine I use. I used, for instance, to give aconite when a horse had a cold—and there are times when such treatment is not amiss; but I am convinced that, in the majority of cases, the horse does fully as well if given no medicine whatever. Simply make him comfortable, keep him in an even temperature and substitute bran for his more solid and substantial grain rations.

Your success in home treatment will depend upon the amount of attention you bestow upon your horses, confining yourself to simple remedies and applying them faithfully and painstakingly. Dabbling in drugs, with an imperfect knowledge of their therapeutic effects, is always dangerous, and almost always followed by failure and loss. I have, perhaps, already dwelt sufficiently upon this point, but two cases that have come very recently under my notice illustrate it so well that I think they are worth relating.

Criminal Bungles of Quacks

A neighbor had a mare that came lame behind. It was nothing worse than a little wrench of her ankle and needed no treatment beyond a few days' rest and bathing with hot water. He sent, however, for a quack veterinarian who told him the leg needed blistering "from hoof to gambrel" and who applied an exceedingly savage blister ointment. Before the first blister had healed, he made a second application directly upon the raw flesh. The result, of course, was a terrible inflammation and swelling, and when this injury finally healed, it left the leg round, hard and permanently swollen. I advised my neighbor, who came to me in his trouble, to use the liniment above recommended for indurated swellings; it greatly reduced it, but nothing could restore it to its natural form, and the mare—a young, handsome and valuable one—was disfigured for life.

In another instance I was asked by a neighbor to come and examine a horse that he said "would not eat." I found the horse pitifully nibbling at a little hay, as if he wanted to eat, but immediately dropping it. I guessed at once that his mouth was sore and, on opening it, found the whole inside entirely raw! Inquiries disclosed the fact that a certain "veterinarian" had been treating the horse for what he called "kidney disease" and the raw mouth was the result of caustic liquids that the ignoramus had been pouring down the poor animal's throat. Of course the horse died, and I could find no reason to suppose he had ever had anything the matter with his kidneys or, in fact, any indisposition whatever, unless, possibly, a slight cold.

I will spare the reader any further account of such atrocities, although they are of constant occurrence. No one who sees them can help wishing that the fakers might be treated with some of their own remedies.

The moral is: Do not meddle with any remedies that you do not understand—nor let any fake veterinarian do the meddling for you.

New Factors in Farming

THE old way was to guess at the cost of production. The new way is to know it. There should be no guesswork about it.

By the old way of farming, the land could be easily overstocked. With the silo and nitrogen-gathering crops, more and better stock can, and should, be kept on each acre.

Abundant crops and good prices have resulted in much benefit to farmers, which means that they are not obliged to rush their products to market and accept whatever price the middlemen may fix.

The farmer of the hour is the one who can quickly discern a faulty system—can show where the fault lies—and at once proceeds to apply the most modern methods and make money out of his land and capital.

Farmers should no longer be content to simply do as well as they have done in the past, but must, and should do better. The profit lies in the newer methods of fertilization, seed and crop selection, and honest marketing. J. W. Jr.

As an evidence that we are not so down on high prices witness how we prefer experience to advice

Around the Farm

Items of Interest and Value to the Progressive Farmer

Up-to-Date Corn-Harvesting

THE corn husker and shredder present new chances for the economic disposition of corn after harvest, either when hauled by teams to the machine from the field or shredded from the stack. The element of danger to life and limb present in the original huskers has been recently nearly eliminated by improved construction. With the ever-increasing demand for more farm cereals the day and age when grain was handled and harvested by hand has forever passed. Machinery for handling the corn crop has been slow to reach perfection, but there is no doubt that now machine huskers and shredders have come to stay. It is probably safe to state that two thirds of the corn crop of this state (Michigan) is handled by the shredder.

Farmers are so busy with other farm work these days that the corn crop after being harvested is left quite late in the fall or until early winter, and in the meantime it thoroughly dries and cures out. If shredded with much moisture in them, corn stalks pack readily, thus causing heating, which in a short time may damage the feed to a considerable extent. It is very urgent, then, to have the unhusked corn as well as the stalks and leaves well cured before stacking, as, ordinarily, quite a time elapses before husking, and corn put up damp and not shredded within a week or ten days is almost sure to heat, and if left unmolested, the stack rapidly settles, the interior getting warm and warmer until finally it burns down to an ill-smelling, rotten heap. A sure indication of a stack spoiling may be observed in a cool morning when steam or vapor may be seen issuing from the stack-top.

Corn to be shredded, being usually cut with the harvester, is tied in small bundles and left shocked in the field to dry out preparatory to husking. This is the most satisfactory method if the weather remains dry. It is then hauled on low-down or handy wagons having wide, flat racks, in small loads, as it is heavy, to the machine. A man cuts the bands and places it in the self-feeder, whence it enters the snapping-rolls. The ears, broken loose from the stalk, drop beneath to the husking-rolls where they are rapidly divested of their husks and thence to the elevator and wagon-box or direct to the crib. The husks and stalks pass on to the shredding cylinder. This revolves very fast, breaking and crushing them into a soft, fluffy mass which is conveyed by a wind-blower to the mow or stack.

The shredded stalks take much less room than when stacked or placed in the mow whole. The shredded fodder, being more compact, ferments slightly and sweats or cures quite similarly to new-mown hay. This makes the whole mass much more edible than when fed in the coarse, starchy state. The refuse left in mangers after feeding makes desirable bedding, the whole eventually going to the manure heap in a good condition to be handled either by hand or the spreader.

In securing corn for seed as husked, there are few better ways than to select it as it emerges from the husker elevator. The man in the wagon throws every large well-developed ear into crates, and at the close of a day's husking he may have selected say, fifty to seventy-five bushels.

Three or four teams, depending on the distance hauled, and six to eight good hands will in the short fall days handle ten or twelve acres of fairly good corn, husking as stated from six to twelve hundred bushels. Taking everything into consideration, corn-shredding these busy farming days has economic advantages that the up-to-date farmer can ill afford to overlook—and more and more he will eventually solve the husking problem by employing the shredder. G. A. RANDALL.

Use System, Save Steps

MATHEMATICS and practical experience both prove that you can cut more corn in a day by going at each shock with a definite system than you can by the main-force-and-awkwardness method. That point being granted, there arises a difference of opinion as to which is the best system. Local conditions of wind and weather, way of planting, weight of crop, and so on, may explain why different regions and different farmers in the same region swear by different schemes. Here, at any rate, we have Maryland represented by "E. A. W.," Wisconsin by Mr. Pease, Ohio by Mr. Smith; and, to make the symposium complete, we reprint the plans of Mr. Rushing,

Southern Illinois, and Mr. Mitchell, Ohio again. We believe most of our readers can pick out of the following plans some one that will nick with their own needs. EDITOR.

Mr. Rushing's Method

[Reprinted from issue of September 10, 1909]

THERE is a great difference of opinion as to the size of the shock to put up. The accompanying illustration shows what I think the most convenient size. If the corn is good, the shock will stand up well, and is not so large that it will spoil. With eight hills square, there will be one hundred and twenty-four stalks of corn provided there are two stalks to each hill.

First, make the shock in the center of the eight-hill square, by tying the tops of four hills together. Then go to the corner of the eight hills as shown at figure 1. Cut that hill, and follow the line to the end. You will have five hills in your hand when you reach the shock.

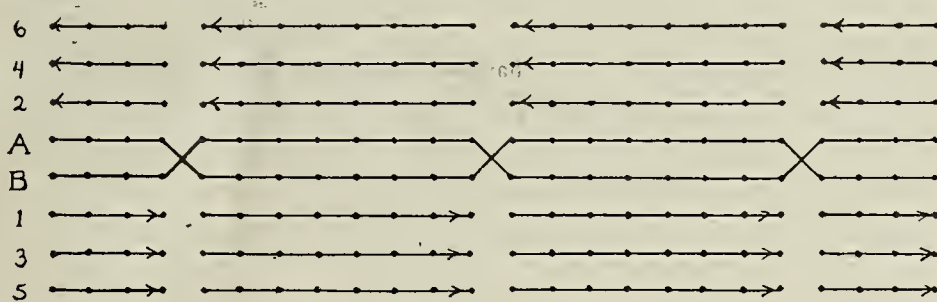
Lay that bunch against the shock, then go to figure 2 and continue in like manner. When the last bunch is finished you will be very near where you commenced.

R. B. RUSHING.

Another Way to Cut Corn

[Reprinted from issue of October 25, 1909]

MR. R. B. RUSHING's method of cutting corn, illustrated in a recent issue of FARM AND FIRESIDE, is a great improvement on the old haphazard way. But a few years ago I learned a way of cutting corn from men who follow it as a business in Hardin and Hancock Counties, Ohio, which I think is superior to Mr. Rushing's system. It is as follows:



Tie one round of "gallows hills," which would be rows A and B for eight rows of corn in shock-row, then cut these rows, setting corn in "gallows hills" and tying securely, which makes a good solid center to shock to. Then take row No. 1, cut to first shock, set corn up, then to second shock, and so on across the field. Then come back on row No. 2. Gather in the rows in this way till the shock-row is finished. Simply cut one row at a time, from shock to shock. There is no walking empty handed, you have a good armful of corn to shock, and are right close to the shock when you get your armful.

In the counties spoken of, corn is usually cut either ten or twelve hills square and the ground seeded to wheat, and this way of cutting is usually followed. Try the plan and cut one fourth more corn in a day. M. MITCHELL.

Making Shocks on a Buck

HERE is a way of cutting corn that is popular in Ohio and in the East. They start shocks on a "buck." This is made of a two-by-six or two-by-four about eight feet long. Fasten two legs about four feet high a foot from one end and let the other end drag on the ground. About half-way down the board bore a hole crossways of the buck and put through it a stick (A) about four feet long. (Some farmers insert this stick upright instead of crossways.)

Count five hills in from the end (hills are numbered from left to right in the diagram) and set up your buck (B) between the sixth and seventh rows (rows numbered down): Start out cutting the sixth row (to the right in the diagram) for five hills and back on the fifth row to the buck, by which time you have a good arm-load; next cut the other way from

the buck (right to left) on the sixth row and back on the fifth. Then you have corn placed on both sides of the shock. Next cut out (to the right) on fourth row and in on third row back to the shock, out on fourth row (to left) and in on third row back to shock; and so on until you finish the six rows (above the shock in the diagram). Then similarly work over the six rows below the shock. When the shock is half done pull out the cross-stick, and when finished pull out the buck.

This method is very handy when two men work together, one cutting rows 1 to 6 and the other cutting rows 7 to 12.

You can cut as in this diagram, twelve rows deep and ten hills wide or twelve by twelve or other arrangement, depending on weight of crop and way it is planted. This plan saves steps and your shocks don't blow down when your back is turned.

WILLIAM SMITH.

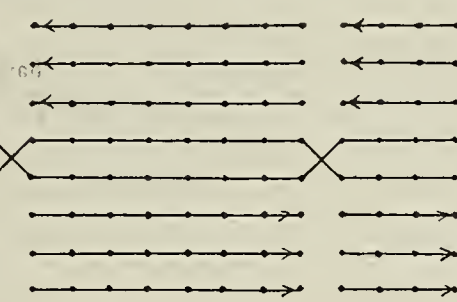
No Blown-Down Shocks This Way

OF THE corn-cutting methods you published last fall, I believe Mr. Mitchell's would be speediest and handiest; but it had one fault. By that method you could cut corn only on perfectly calm days. Last season, in this section of Maryland, calm days were the exception.

Here is the best all-around method I have ever seen.

To cut eight hills square gives four rows on a side. The diagram shows how two men go about cutting them. One man's course is shown by solid lines, the other's by dotted lines.

The first man cuts his two inside rows in to shock-hills and makes the stand, or "horse," by tying tops of shock-hills around his armful; by that time the other man has tied last shock and cut his two inside rows to the new shock. Then, cut



one row away from shock to limit and cut back next row to shock. Follow this plan with two outside rows or walk to farther ends and cut two rows to shock, if you prefer, as it makes little difference with two outside rows.

This makes four armfuls to the shock, for each man, and not a motion or step wasted. One man ties shock; the other makes "horses." Usually, the man making "horses" helps lay band around before going ahead.

By this method there is no pleasing anticipation of having it all to set up again if a puff of air comes along.

If you have spare time before cutting-time, make "horses" in advance.

Any one, fairly healthy, weighing over one hundred and fifty pounds, that cannot cut from one and a half to two acres per day (according to weight of crop) can hardly call himself a man. I am less than half a man—being broken by many months of illness and weighing only about one hundred and fifteen pounds—and I have frequently cut from one and one half to two acres per day. It is much easier for a heavier man. E. A. W.

Not So Many Armfuls

LAST season I noticed in your paper an article by R. B. Rushing, illustrating his way of cutting corn, making a shock in twelve armfuls. It is surely a good thing to do the work systematically, but I think my way is better as it only takes eight armfuls and I do not have to walk more than one half as far. It also makes it handier if two men are working together.

The accompanying illustration explains the method: Tie the four center hills together for a foundation, then begin at number 1 and follow to the end of the line, then at number 2, and so on.

H. L. PEASE.

A New Idea for County Fairs

AT A good many county fairs there is a regrettable tendency to get into a rut. The fair is the same year after year, and there is difficulty in getting people interested in it and keeping them interested.

A live fair manager is continually looking for new features. One of the most wide-awake fair associations in Iowa is the one at Mason City. Two years ago the plan was adopted there of having a special exhibit from each township. Liberal prizes were offered, and each township that wished to compete was given a space about twelve by sixteen feet in size. The exhibit with which it filled this space could be of any character that the township director might choose, so long as all the products shown were raised within the township. This gave a great scope for the working out of original ideas.

One man was appointed to go ahead with the work for each township. He assigned certain parts of the work to various people who were willing to help. A special effort was made to interest the children. Some of the schools arranged exhibits consisting of the things made in school. Certain children were assigned the task of collecting samples of all the different wood grown in the township, others the various kinds of grain and grasses, and others the noxious weeds. Some families prepared a certain number of neat bundles of oats. Others did the same for wheat, and others furnished devices made from corn. Some boy or girl who was good with the kodak was given the task of preparing a set of pictures of farm-houses and farm scenes in the township.

The interest created in this way was remarkable. Local pride was stimulated. The people of one township were unwilling to admit that their products were inferior to those from another. The only way they could prove it was to prepare an exhibit. Some of these exhibits were almost as good as the county exhibits at the state fair. When it came to the final judging by an expert from the agricultural college the interest was intense, and almost every one from the townships represented was there to see who would get the ribbons. The association has been so well pleased with the plan in the two years they have tried it that it will be made a permanent feature of the fair, and larger prizes offered in the future.

C. V. GREGORY.

Headwork Shop Winners

THE following received the highest number of votes for ideas presented in the June 25th Headwork Shop:

W. A. Brock, "A New Wire-Stretcher."

D. Conger, "Staple-Puller."

Albert Murphy "So the Load Won't Slip"

Mr. Brock forgot to put his address on his contribution. Will he kindly send it in? Usually we do not use any matter submitted without the name and address of the writer, but we thought Mr. Brock's idea was good enough to warrant an exception being made. EDITOR.

"All Worked Early and Late"

[CONTINUED FROM PAGE 3]

When the old lady died, the heirs sold the farm for \$2,600.00—less than it would cost now to build the house. The buyer had enough money to pay down, but none left for repairs. But the family took hold and the first year, in place of the burdocks and sumacs, which they dug out by hand, they raised beets, onions—lots of them—Lima beans and cucumbers. The vines ran right out to the wagon-track. They found a ready market for all their garden truck in the village (Montour Falls) a mile away.

They burned up the old stump fences, and plowed the hedge-rows, sowing oats and buckwheat right up to the road. Now, after three years, they have wire fence, so they can raise pigs and poultry. They have put in berries and continue the onions and other garden stuffs. They have put new roofs on the buildings, the house has been painted, and the farm has nearly doubled in value since they bought it. The secret of success has been conscientious work. They did not have to hire much, as there were enough of them to do the work among themselves; they knew how to take hold of anything, and all worked early and late. Now they can ease up a little.

MRS. ALMA MILLER.
Watkins, New York.

Fruit-Growing—By Samuel B. Green

Worth-While Spraying Hints

THE methods of spraying of plants naturally divide themselves into two groups, (1) dust spraying and (2) liquid spraying.

In a general way, it may safely be stated that the dust form is not as efficient as the liquid, and the difference in efficiency is enough to make it worth the extra trouble necessary to employ the liquid form under all ordinary circumstances.

The principal difficulty with the dust spray is in getting it to stick to the foliage and fruit. It should be applied while the foliage is damp. This may be soon after a rain or while the foliage is damp with dew. Advantage cannot often be taken of the former condition; hence one must usually rely on getting the dust spray on very early in the morning or late in the evening. In either case it will be out of the regular working hours and therefore disagreeable. The wind also interferes much more with the application of dust sprays than with liquid sprays. This difficulty, however, is reduced by the fact that in the early morning, when the dust spray must usually be applied, there is seldom wind during the summer months. Another reason for the comparative inefficiency of dust sprays—especially dry Bordeaux mixture—is that the dry form can never be obtained in as finely divided condition, whether prepared at home or in the factory, as in good home-made liquid sprays. This means that an equal or even greater quantity of the dust form cannot be as thoroughly distributed over a given amount of leaf surface as can the liquid form, and hence will leave more unprotected spots, through which disease or insect pests may enter.

The great advantage in favor of dust sprays is the comparative cheapness of their application, because large quantities of water do not need to be hauled around in order to apply the spraying material; but, as previously stated, this is not enough to make up for the difference in efficiency. However, it may become of much importance in the case of hilly land. Here the light dust-spray outfits can be used when it would be impossible to get around with a barrel of liquid spray or, much less, with the large wagon outfits.

Thoroughness of work is essential to real success in spraying. The man who goes about his trees in a "hit or miss" fashion, leaving a branch unsprayed here and the center of the tree un-

sprayed there, is the one who finds that spraying does not pay. An apple-tree that is not completely covered with a coat of poison is not completely protected from the second brood of the codling-moth larvae. Every inch of twig and branch of a tree sprayed for the San José scale that is not coated with the mixture has just as many live scales on it as it had before the spraying outfit came by that tree, and hence remains as a source of infection on the new growth and of re-infection on the treated portions as soon as the coat of spray becomes ineffective.

Many who begin to spray after an orchard is about full grown find that the trees are set too closely together. It is impossible to do good work where one cannot get around conveniently with the spray pole. Moreover, in a closely-set orchard, a horse pulling a barrel outfit on a stone-boat will often not be able to get down the row, much less power outfits.

For spraying on a very small scale, the knapsack, bucket pump and five-gallon compressed-air outfits are very serviceable. The cheapest and most generally useful spraying outfit on areas up to five acres is a first-class oil-barrel set upright on a stone-boat with a good spray pump fastened to it. On larger areas up to fifteen or twenty acres the wagon tank with a horizontal hand pump is more practical, since it has greater capacity and efficiency. On areas of over twenty acres an air-cooled gasoline outfit will usually be a good investment. It relieves the laborious work of pumping by hand, correspondingly reduces the working force and gives a higher pressure. With a little mechanical ingenuity and care on the part of the operator it can easily be kept in good working order.

When to Plant Pine-Seeds

A Wisconsin reader has some pine-seed received from Norway and asks whether it would do to plant them now. August is pretty late to be planting pine-seed, though we have had very good success with seedlings planted the end of June or even early in July.

For summer planting, as a general proposition, I would suggest that you soak the seed in water for twenty-four hours and then sow in beds about four feet wide, putting the seed in drills about four inches apart and covering with light soil about one half inch, and then over all put one fourth of an inch of clear

sand. Then shade the whole bed with lath screen or similar material, shutting off about one half the sunlight, so that there will be a play of light and shadow on the bed when the sun shines. Sometimes, instead of using lath for screens, we cover the bed with boughs. While this will answer fairly well, it is rather clumsy and not so good as lath screens, which we generally make about four feet square. Planted in this way the last of June or first of July, the seeds come up promptly and make fully as good growth as if planted earlier.

Oak Borers a Mild Pest

R. L. D., Iowa—The oak-twig borer, which you refer to as cutting off the smaller branches of the bur-oak trees, is very common in this section. However, this is seldom a serious injury and amounts to little more than a pruning. The eggs are laid on the bark of the branches early in the season. They hatch and the small borers soon eat into the pith of the tree, where they continue to feed and undergo their changes of form. Just before the borer undergoes his changes he cuts the wood behind him out to the bark. This bark then dries up and the branch breaks off in severe winds.

The best practical method of destroying this insect is to gather the fallen branches and burn them, by which means the worms within them will be destroyed.

Autumn Planting of Cuttings

It should be more generally known that cuttings of willow, poplar, currant and other hardy plants may be safely planted out in autumn, provided the land is in good condition. More than ordinary pains should be taken in this case to firm the soil about the base of the cuttings, and the whole row should be covered with manure on the approach of winter, to protect from alternate freezing and thawing. Ofttimes one has plenty of time in autumn to put out cuttings, when in the spring he is liable to be too busy.

Currant-cuttings that are made up as soon as the leaves fall in autumn, which will often be as early as the fifteenth of September, will frequently have roots on them several inches long by the time the ground freezes hard if they are planted at once, and this is a start that helps them very much in making a good growth the following year.

San José Scale on Peach

A Florida subscriber recently sent me a piece of peach twig infested with the eggs of scale, I think the San José scale—if not that, then some closely allied species undoubtedly injurious to fruit-trees. These scales were undoubtedly on the trees when they were purchased.

As for treatment, I would recommend cutting off and burning all the weak and dead branches and twigs. The most effective spray for this trouble is what is known as the "lime-sulphur wash," but the best time to apply this is in the autumn or winter after the leaves have fallen, at which time, if the trees are thoroughly treated with it, this and other scales will be destroyed.

This scale insect can only move about for a few days, soon after it hatches from the egg. At this time it is exceedingly vulnerable and easily destroyed with ordinary remedies. In the case of our correspondent, that time has probably passed. In such a case it will do some good to spray the trees with a strong solution of whale-oil or fish-oil soap and water. This will undoubtedly interfere with the development of the young and more tender scales; then, this winter, make a thorough job of destroying all the scales on your peach-trees by using the lime-sulphur wash.

Mildew on Rose-Leaves

Mrs. C. P. T., North Carolina—The leaves of the Red Rambler you sent on, covered with a whitish dust, are infested with what is known as "powdery mildew." As you state, this causes the leaves to curl up. This disease is quite common on some classes of roses at any time of the year, and all roses are susceptible to it in cold, damp seasons. While this is a fungous disease, yet it is not prevalent except when we have cold, damp weather; and it is probable that you were having such weather when the disease occurred, or else the roses were growing in the shade, or they would not have been so badly infected.

The Red Rambler is quite resistant to this disease and is seldom injured by it when growing in good locations. This mildew is very common on roses late in autumn when the nights get cold.

With better weather conditions, it is probable that the new growth on your roses will not show this injury.

The Adventures of Sir Hubert, Knight of the Orchards

By N. T. Frame



UBERT, the Fruit-Grower, like Don Quixote of old, had delved deeply into the ancient lore of chivalry. He read many books and pondered long upon them, until he too seemed to feel the spirit of chivalry stirring within him; and it became his dearest wish to live as the heroes of his legends had lived, in the days of old romance.

One day, as he sat musing thus, a wonderful vision came to him. There appeared a shapely tree, graceful in all its parts, bearing on its bended branches many baskets of red and golden fruit, every fruit perfect. Before this wondrous tree Hubert fell on his knees in an attitude of humble adoration.

One of the arms of the tree swayed gently toward him and placed upon the ground in front of him the complete armor of a knight. The shield bore a coat of arms—three triangles interlinked, and in each triangle a fruit-tree, one of apple, one of peach and one of pear.

Sir Hubert, having risen and buckled on the armor, after swearing everlasting loyalty to the beautiful tree, as to his Lady Love, went forth, the Knight of the Orchards, to do battle against any and

all wrongs which might seem to him threatening danger or insult to his tree or to her sisters.

The Adventure of the Apple-Barrels

Riding along in pursuit of such adventure Sir Hubert soon overtook Mr. Practical Grower. On his wagon was a large barrel-rack. Sir Hubert at once correctly surmised that Mr. Practical Grower was taking advantage for a time of slack work to get his supply of apple-barrels in anticipation of the picking.

Such thriftiness Sir Hubert could not but commend; yet something in the face of Mr. Practical Grower warned him that his presence and help might be needed when the cooper-shop was reached. So he fell in behind the wagon with the rack and, for the present, held his peace.

When the wagon had stopped at the cooper-shop, Sir Hubert gave close attention to the door from which the barrels were to be handed out. Immediately the first barrel appeared to view in the hands of the cooper himself, Sir Hubert was stirred to anger. Proclaiming in a loud voice his loyalty to his love, the Tree, he struck from the hands of the cooper the offending barrel. It rolled under the wagon, startling the horses in such a manner that one of the wheels was run squarely over the barrel, crushing in its staves.

The cooper, thus rudely received, picked up a cudgel and would have belabored Sir Hubert, had not the latter wisely climbed into the wagon, from which position of vantage he addressed the cooper.

"Know you not that a barrel so rough, so stained, so full of knots and worm-holes is not a fit package for the beautiful fruit borne by Mr. Practical Grower's trees?"

"This much I know," replied the cooper still in anger, "that the barrel you condemn is as good a barrel as Mr. Practical Grower is willing to pay for."

"But you told me," interrupted Mr. Practical Grower in a manner emboldened by the presence of Sir Hubert, "that your barrels were of the best quality, just like what every one used around here."

"Friends," interposed Sir Hubert, "argue not further. Listen to words of wisdom about apple-barrels."

"On the markets in the big cities last winter I saw beautiful apples, such as Mr. Practical Grower raises, packed in rough-looking barrels much like the one yonder under the wheels. Also I saw many inferior apples packed in smooth, clean, nice-looking barrels. And, though I regret to say it, it appeared that the patrons of the markets were paying the better prices for the poorer apples in the better barrels."

"If poor apples will sell because of good barrels, thought I, how much better will good apples sell in good barrels!"

"Therefore, Mr. Practical Grower, I demand of you in the name of the trees in your orchard, in whose behalf I am sworn to do battle, that you order this cooper to make up for you a sample barrel at a price of five cents more than you have ever before paid. If he can't get the kind of materials you want or if the

barrel he makes for you is not worth the extra five cents, go to some other cooper."

"If you do not know of any other, write to The National Cooper's Journal, Philadelphia, Pennsylvania, telling the editor how many barrels you need and asking him for addresses of coopers able to supply the kind of barrels you want. Continue the correspondence until you can get the best barrels at proper prices."

"I warn you that if ever again you use cheap barrels not fit for the fruit from your trees, I shall return to challenge you to personal combat."

"And you, Mr. Cooper, beware lest a reputation for cheap and ill-looking barrels lose you the trade of the growers, who are rapidly learning that good apples deserve good barrels."

Having said which, Sir Hubert came down from the wagon and proceeded on his journey, rejoicing that he had thus so successfully waged the fight in behalf of his love, the Tree.

But when he was out of sight, Mr. Practical Grower argued with the cooper that he was minded to follow Sir Hubert's advice and seek another cooper-shop, but if one cent per barrel could be taken from the price, he believed the barrels like the one under the wheel might do this year.

These terms having been finally agreed upon, Mr. Practical Grower returned home with his load of barrels, rejoicing and forgetful, or at least unmindful, of the threatened challenge from Sir Hubert, the Knight of the Orchards.

Too long a look ahead sometimes leaves the present pathway unmended

Gardening---By T. Greiner

Fine Fruit Not Without Fine Foliage

THE tomato or potato leaf, in itself, is not what we want for use. But we need its services. To make really good tomatoes or mealy potatoes, a good lot of healthy foliage is indispensable. Neither will we have well-ripened and sweet gooseberries or raspberries or good currants on bushes that have been defoliated by worms or by disease. For that reason the good gardener must make every effort to preserve the foliage of his crops in full health and amount. Watch and spray to the end of the season or until the maturity and high quality of fruits or tubers, etc., are assured.

When you go through your potato-patch, you can easily find the big potatoes, simply by selecting the vines as big as a man's finger, with a fair lot of healthy stalks. If they are well provided with healthy leaves, they will give you well-matured and mealy potatoes, full of starch. Or if you want small potatoes and soggy potatoes, look for them in the hills eaten down to bare stalks by "bugs."

Staking tomato plants? No objection to it. A patch of plants trimmed to one or two stalks often looks very nice. Don't imagine, however, that reduction of the foliage and exposure of the clusters of tomatoes themselves to the full sunlight will improve the quality of the fruit. Preserve all the foliage possible. The sweetest blackberries are often found in the densest shade of the vines, if only the leaves themselves are sun-exposed. So we often find the finest tomatoes right under cover of heavy foliage where no ray of light ever reached them. Fine clusters of grapes will grow inside of tight paper bags.

Save the foliage. Give it sun—the more, the better. The fruit in shade and darkness will then take care of itself.

What About Growing Herbs?

A reader asks for information on growing herbs for sale. "Some of them are said to be more profitable than ginseng," he says. "Which are the most promising?"

Seedsmen list a dozen or two of these "pot herbs." The one oftenest seen, and perhaps the most important, commercially, is sage. Like many others, it is easily

grown from seed, and a plantation once established will yield its aromatic leaves for many years. They should be gathered when in their prime and carefully dried in the shade. If you have a home market for sage, in groceries or drug-stores, it may pay you to grow it. It is popular for flavoring meats, etc.

The Germans want their dill to make "dill pickles." It is an annual readily grown from seed, and plants are liable to come up from self-sown seed. Another easily-grown herb is caraway, the seeds of which are used in flavoring liquors, bread and cheese. Others are anise, balm, basil, borage, coriander, fennel, sweet marjoram, mint, thyme, etc. Most important among medicinal herbs we have arnica, belladonna, catnip, elecampane, horehound, hyssop, pennyroyal, wormwood, etc. I believe the United States Department of Agriculture has issued a bulletin on the culture and uses of medicinal-herbs.

Cauliflower Versus Cabbages

I have been charging forty cents per hundred for late cauliflower-plants. On account of higher price of seed, they cost more than cabbage-plants, but at the price named it pays to raise them. And when one has good plants, at this time, I think it pays me better to raise cauliflowers than late cabbages. The latter can usually be bought from our farmers here in western New York at a very few cents a head, meaning a good, large solid one. But good cauliflowers, in September and October, are often in demand at ten, fifteen and even twenty cents a head. On rich soil they are a fairly reliable crop—always on condition that plants were grown from good seed or seed of good varieties, such as Extra Early Erfurt, Prize Earliest, Extra Early Snowball, etc.

If you have plants growing, try a mulch of manure or any kind of litter, covering the entire surface of the soil between the plants. Also try the virtues of nitrate of soda, if you have it, scattering it broadcast between the rows, or around the plants, as you would wheat, by hand, and in about the same quantity or bulk. Try irrigation if you have water handy. Under favorable circumstances you can raise nearly twice as many good cauliflower-heads on a piece of ground as late cabbages and realize four times the money returns.

Plant-Setting in Dry Weather

Just now we are having a hard job setting celery and cabbage plants. We can manage the latter all right, by soaking the seed-bed so that the plants are pulled up with roots unbroken and some soil adhering to them, although we do lose a few plants after they are set. But there is trouble with celery-plants. The soil is dry and the sun burning hot. This is more than an ordinary celery-plant will stand. I have been losing many and have to replant repeatedly in order to get a full stand. A friend across the way has connections from the village waterworks, so he has comparatively plain sailing. He marks his rows and lets the water run.

If the sun comes out very hot, it is well to give new-set celery-plants a little shade. Sometimes a little fine hay thrown over the plants will do. A board over the row, held up by little stakes or blocks, is better. When I find it necessary to use boards in this way, they are left on for a few days just in the middle of the day and removed for good when the plants have taken a new hold in the soil.

But by watching the weather and our chances, we can usually manage to set all such plants even during July and August without extra precautions of shading, etc. Up to the middle of August is still time, in many localities, to set winter celery or to transplant table beets, winter radish, etc., for filling vacant spots.

Gardener and Magistrate

This morning I was called out of my Lima-bean patch (where I was busy fixing trellises for them to run on) by the appearance at the house of Ferdinand Sponholtz, a farmer of Youngstown, in this county, and a reader of FARM AND FIRE-SIDE for many years, who came with his ladylove to have the knot tied by one whose writings in these columns he claims have benefited him so much right along. I gladly and quickly made the two one and joined them "for better or for worse," then returned to my garden, hoping that the couple may have made the change for better. I feel that it could hardly be otherwise if he will continue to read FARM AND FIRESIDE and to follow my advice, which means that he will keep his family well supplied with fresh vegetables and fruits, so they all will be well and live happy ever after.

Pie-Plant In Midwinter—By A. J. Rogers

EACH year the consumption of rhubarb in fruit, sauces and pies has increased. It is used to some extent throughout the summer, but the best of prices are in winter and early spring.

There are two methods of forcing rhubarb. The first is by means of forcing hills; the second by forcing the roots during winter and early spring in cool, dark cellars or under greenhouse benches. In the first method, a small cold-frame is placed over a plant where it grows permanently in the field. The frame consists of a box large enough to accommodate the full-grown stalks with a pane of glass over the top. In the fall the box is put in place and leaves or straw are filled in and around to prevent deep freezing. The following spring, from the middle of March to the first of April, this mulch is removed. Fresh heating manure is packed up around the sides of the frame and the pane of glass is put on the top. Sometimes the forcing hill is so constructed that the glass will have a slight incline toward the south. Under this method the ground around the rhubarb roots soon warms up and marketable stalks are obtained two to four weeks before the regular crop.

By means of the second method, rhubarb may be obtained any time during the winter. The growth of the previous year is depended upon to store enough food in the roots to produce the stalks. Sometimes, after the crop has been obtained, the roots are again placed in the field, allowed to grow one season and forced again the following year, but this practice, on the whole, is unsatisfactory and not to be recommended.

In order to produce the best roots, the rhubarb should grow in deep, rich soil and should have a long, continuous growing season. There is practically no danger in over-manuring or over-fertilizing. The



Rhubarb Under Lettuce Bench—Oil-Cloth Used to Exclude Light is Raised

plants are grown in rows ten to twelve inches apart in the row, with the rows four feet apart. In the late fall the roots are dug, put in piles and frozen, and then brought into the greenhouse. These roots are packed as closely together as possible; the spaces are filled in with a good garden loam soil and the whole covered so that the crowns are slightly below the surface.

A small amount of light coming from one direction will have a tendency to produce spindly stalks, so it is best to shut off the light entirely. Before the stalks come up, very little water should be applied, but as soon as they begin to grow they will need a considerable amount. A temperature fit for growing lettuce is ideal for the forcing of rhubarb; about fifty-five to sixty degrees in the daytime and forty-five to fifty degrees at night.

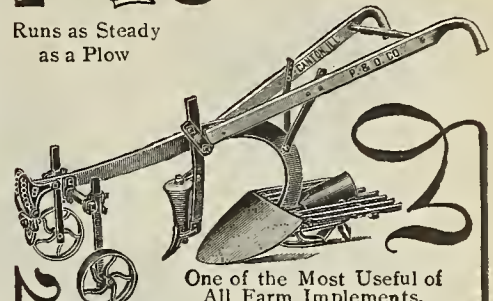
In harvesting the stalks, grasp them as close to the crown as possible and pull them off. These stalks are put in bundles of five pounds and tied with raffia or string. It takes about eight to ten weeks, depending on the temperature, to produce all the rhubarb from one planting of roots.

The best method of obtaining the roots is a problem which was taken up by the Wisconsin station some years ago. Rhubarb-seed has a low percentage of germination, consequently a direct sowing of seed produces a very uneven stand of plants. Volunteer seedlings, from around the old mother-plants, when transplanted into rows produced large, thrifty plants and better roots than the plants of the spring sowing. This indicated the advisability of fall seeding. So, in August of 1908, thickly-seeded beds, six by twelve feet, were made. The seed germinated nicely that fall, and early in the spring of 1909, while the ground was still frozen, cold-frames were placed over these areas. About a month after the frames were put over the seed-bed the entire area was covered with young plants. When these seedlings developed several leaves they were transplanted into a rich loamy clay soil. The seedlings were allowed to grow that season; then late in the fall they were dug up, allowed to freeze and, as before, brought in for forcing under the benches in the greenhouse. It was found that seedlings grown in this way for one year produced just as good rhubarb and just as good quality as older roots.

If the grower can get five cents a pound for his rhubarb in the spring, he is making profit; but by forcing indoors he can get stalks to sell in the winter when the price of rhubarb is ten to fifteen cents. When it is grown in waste room, heated for some other purpose, where little or no attention is required for the care of forcing, the cost of production is very small. Last winter at the Wisconsin station, a space of four by eighteen feet under some sections of lettuce produced about one hundred and fifty pounds of rhubarb. This, at fifteen cents a pound, gave a gross of twenty-two dollars and fifty cents, for only eight weeks' produce.

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Poultry-Raising

The Hen-Yard in August

THIS month is devoted to molting. Bran fed twice a day with skim-milk will help the feathering process. One eighth of linseed-meal and seven eighths of clover-seed moistened with skim-milk is a good feed to give on alternate days. Plenty of fresh green food must be given when the birds are closely penned and one meal should be mainly whole wheat. When fowls are confined, also, a more uniform molt is obtained if they are grouped in small pens, each accommodating six or eight, as each would then secure a proper share of food—a thing specially important at this time.

The interior of the poultry-house should again be sprayed with the lime-and-sulphur solution mentioned in the June number or with some other searching disinfectant, and the perches should be thoroughly covered with it. Such fowls as show rough legs should be treated with kerosene applied to the legs with a feather or brush. To do quick work the legs of the fowls can be simply dipped in the kerosene. The severity of this treatment can be toned down by diluting the kerosene with linseed-oil.

The young flock of growing pullets and fall roasters should have a plentiful supply of an all-around ration. Corn can better be fed to them than to the older fowls during confinement, but it should be given sparingly even to them. Plenty of whole wheat, oats and dairy waste with fresh-cut clover will keep them growing.

M. ROBERTS CONOVER.

That Critical "Bead" Stage

DURING the late summer and early fall the turkeys should be closely watched. The most critical time in a turkey's life is when the "bead" begins to appear on the head, and the body is covered with pin-feathers. However, if young turkeys are in proper health and vigor, they will come through this period without any trouble.

Half-grown turkeys get very lousy, and in that state are more likely to take diseases, because of their weakened condition. When a turkey begins to droop, look for lice. Better look once in a while, anyway, on general principles. If no vermin are found and still there is something wrong, you may be sure that their digestive organs are deranged. But make sure about the vermin first. Look under the wings, around the vent, among the feathers in front of the thighs, around the tail and on the wings. Among the large wing-feathers is a favorite rendezvous for vermin. They are sometimes to be found there by hundreds, when scarcely a louse can be found elsewhere. Spread the wing-feathers apart, then raise the short feathers on the "shoulder" or outside of the wing. These short feathers cover the large quills. Among the latter is where the rascals hide themselves. Louse-powder will settle them, but olive or castor oil

will do it as well and much quicker. Apply the oil wherever the lice are found; it will not injure the turkeys or, in fact, any young fowl, as will lard or kerosene. It must come in actual contact with the vermin, however, in order to be effective.

Be careful not to over-feed just now. Too much grain will cause indigestion and liver disease. This is what is sometimes called cholera. It is not really cholera, but is nearly as fatal. It is sometimes known as black-head, though the head does not always turn black; quite as frequently it turns a pale yellow. Symptoms vary, but there is always more or less diarrhea and fever, which causes great thirst. There is no cure, so far as I know. Sometimes whole flocks are swept away by this disease. This is doubtless the reason why the disease is mistaken for cholera.

Where turkeys have free access to grain-fields it is difficult to control or regulate their diet. They will not thrive when kept confined in yards, but an orchard properly fenced is a very good place for them. One wing should be cropped so they cannot fly up into the trees, because when high up in a tree the temptation to fly over the fence is too great for a turkey that is inclined to wander.

Rye is very harmful to turkeys. It is hard to digest and too stimulating. If it has begun to sprout, it is sure to work mischief. Turkeys are apt to visit grain-fields from the time the grain begins to ripen until after it is threshed. Around straw-stacks they are almost sure to find moldy or sprouted grain. Keep them away from it, if possible. Too much good grain is harmful, to say nothing of spoiled grain.

If there are no grain-fields within reach, a little wheat and oats should be fed once or twice a day. Don't give any corn until the turkeys are nearly matured. Turkeys prefer corn to any other grain, but it is too fattening for growing turkeys. Corn-fed turkeys are almost sure to have liver disease; therefore, don't begin to feed corn until a few weeks before they are wanted for market. When the weather gets colder and the turkeys are well developed, a daily corn ration should be given along with other feed.

It is not a good plan to keep turkeys in small yards or coops. They must have exercise. Sharp grit and pure water are necessities. The lack of grit is one cause of bowel disease. Charcoal is beneficial, but will not answer for grinding purposes.

ANNA WADE GALLIGHER.

Sanitation for the Chicks

AS THE "dog-days" come on and the heat increases it will be necessary to clean and move the coops and brooders to fresh ground oftener. Accumulated droppings very quickly ferment and become foul in hot weather and cause much ill health and discomfort in the flocks, besides encouraging the development of lice and mites. I know of absolutely nothing more productive of mopy, sickly chicks than foul ground or floors on which they must sleep nights, and the consequent foul air which they must inhale. Plenty of fresh air, and freedom from crowding and heating, will insure, to a great extent, thrifty chicks, other things being equal.

It is well, in planning each season's work, to try to locate the brooders and coops in an entirely new section of the premises from where they were last year. It may make a few more steps in carrying food, etc., but in another way it will save you labor and worry enough to more than balance. Doctoring ailing chicks is most discouraging and laborious work. This simple preventive measure will help us to avoid many of the chick ailments, especially gapes.

It is not too late now to get the coops to new ground, moving them a few feet each day until they are where you want them. The frequent movings also avoid killing out the grass in the various places where the coops have stood, causing bad, unsightly spots, where later weeds spring up. Anything that helps to keep the poultry-yards neat and attractive should be welcomed by all, as one of the most objectionable features of poultry work is the forlorn appearance the flock soon gives a place, unless care has been taken to prevent.

MRS. E. G. FEINT.

One good hen is worth a dozen that just about pay their way.

Break up the broody hens at once if they are not to be set. They take up nest room and breed lice.

A Florida subscriber sends us this recommendation: "If you will get tobacco-stems to make the nests of your setting hens, they will not be bothered with mites."

Live Stock and Dairy

"The Woolly West"

Do you ever think where we get all the wool for making clothes to dress the American people? It takes a lot of it to supply ninety million men, women and children with the things made from wool that they use every day in the year. And that is not all, for when night comes on they call for blankets of wool.

Our national sheepfold comprises every state and political division of our country. It contains 57,216,000 animals, valued at \$233,664,000, or an average of \$4.08 per head. But that group of states known as the far West now boasts the largest individual herds of sheep and claims more than one half of the animals kept in the United States. The figures for 1909 show the following sheep returns in the big wool-producing states of the West: Montana, 5,747,000; Wyoming, 7,316,000; Colorado, 1,729,000; New Mexico, 4,729,000; Arizona, 1,020,000; Utah, 3,177,000; Nevada, 1,585,000; Idaho, 4,248,000; Washington, 783,000; Oregon, 2,581,000; California, 2,372,000.

Western sheep-farming differs materially from the systems of the Eastern states. The old range days have not ceased and thousands of sheep are grown and fed on government lands. The big owners employ herders and send them into the mountains in the summer and onto the deserts in the winter to keep the sheep on stated ranges. Outside of the forest reserves these ranges are never patrolled by government men and no rentals are demanded or collected.

for "Western scoured," the Texas twelve-months scoured wool selling for seventy-eight cents a pound. Sheepmen of the West figure that the wool pays the entire cost of handling a flock, or band, and gives good interest on the investment. That includes losses, taxes, hired help and other expenses incidental to growing sheep on the range.

The increase in a flock of sheep represents almost entire profit to the man who has no rentals to pay and keeps his sheep on government lands. That sometimes stands as high as one hundred and twenty per cent. in a year. Few good sheep-herds show less than ninety per cent. increase year after year. The lambs are generally worth more than the old sheep and enable the range sheepmen to get back the original capital invested every year.

The settling of the West with farmers, will reduce the area of government land to such an extent that this large-scale type of sheep-growing will certainly be on the wane. The result will be increased prices in wool and mutton. That effect has been noticed in the cattle business, as a result of fencing the ranges. A hint to the farmers should be sufficient.

JOEL SHOMAKER.

A Fair Deal in the Dairy

SO MUCH has already been said about getting rid of the poor cows that I believe it is in order to have some talk on the good cows. It is one thing to pick the drones out of the herd and another

system to fill the milk-pail, besides producing extra heat for her own body to a great extent. Of course, the question of stable warmth comes in, also, but some extra vitality will be required to resist the winter cold, anyhow.

Much of the pasture-land is clipped short now, and unless this is supplemented with something, the cows, even though they are well bred and excellent individuals, will shrink in milk and flesh, and by the time they freshen will likely be thin and in no shape for the hard tug of the winter season.

This is why I am writing this article. I can speak from experience, as I had this very thing happen in my own dairy herd. One cannot be too emphatic in urging farmers to help out their cows with supplementary feeds when grass begins to fail.

Yes, it is all right to pick out the poor cows and get rid of them, but we must not, at any time of the year, forget about our good, faithful ones as we go along.

R. B. RUSHING.

"Bull Cows"

A FLORIDA subscriber writes about a cow, almost due to calf, which "seems to be almost constantly in heat, bellows and acts more like a bull than a cow." Quite often cows become affected in the manner described as they advance in age. Their actions are an indication of a decline in breeding power and it is quite likely that the calf this cow is now carrying will be her last one, although such cows some-



"Much of the pasture-land is clipped short now"

American sheep produce an average of six pounds of wool per head and are shorn once a year. On the big western ranches the traditional hand shears have been largely replaced by shearing-machines run by electric or gasoline power.

Wool goes to the scouring plants and factories of the country and forms the raw material for supplying thousands of men, women and girls with employment. When taken from the sheep it is in what is known as the dirt condition. The wool fiber must be cleaned and made suitable for carding into rolls, spinning into yarn and weaving into cloth. In the washing process the average fleece shrinks about sixty per cent. That means that for every one hundred pounds of wool shipped from the sheep-shearing pens of the West to the scouring plants of the East the buyer pays the freight on sixty pounds of dirt.

This state, Washington, furnishes the highest wool clip of any state, it being nine and one half pounds to the sheep. The lowest averages are reported from the Carolinas, being four pounds to the fleece. That difference may be explained by the fact that approximately all of the sheep grown here in Washington feed upon the range and are driven into new pastures with the change of seasons. They do not suffer from heat in summer because of being in the mountains and are not cold in winter because of shelter in the valleys.

Wool prices are better than ever in the history of the country. For 1909 the sales prices ranged from thirty-four cents per pound for "Ohio washed," to eighty cents

thing to take care of the faithful workers. And if we are not careful we shall be giving so much attention to selecting and getting rid of the poor ones that we shall neglect the good ones. From now on all this summer and fall is a very bad time to neglect those that are expected to fill the pail next winter.

Picking out and keeping the good cows means more than just refusing to sell them to the butcher. It means feeding them the right kind of feed in the right quantities and at the right time. It means giving them shade and shelter in the hot summer and freedom from flies, and it means giving them well-ventilated, sun-shiny, clean stables in winter.

It means that, even though the milk-supply does fall off in the late summer just before the fall calves are born, the cows must not be allowed to get down thin in flesh. It means taking care of the cow for twelve months in the year, not simply while she is yielding milk.

Many a farmer feeds his cows as nearly right as he knows during the time the milk is flowing freely, in the early part of the summer, and then allows her to shift for herself during the late hot summer months when the flow is often reduced.

This, however, is a time when she needs careful attention just as much as at any other. And I don't know but it is the most critical of all.

She must store up strength and vitality during the period of rest which shall help to carry her through the winter season when she will have great drafts on her

times do happen to get with calf again. After the cow has given birth to the calf she may cease for a while her bullish actions, but not permanently.

It is so likely that her period of usefulness is completed that it will scarcely pay to try bringing about a normal condition. However, a treatment that sometimes proves beneficial is the one termed the carbolic acid treatment, which consists of mixing a teaspoonful of carbolic acid crystals in a pint of water every other day and sprinkling it over her feed.

Further than this, when she calves see to it that she cleans well, and every morning flush out the vagina with a gallon of two-per-cent. solution of creolin.

To do this, secure a piece of half-inch hose, about three and one half feet long; place a funnel in one end and after greasing the other end of the hose well insert it into the vagina, pressing it in carefully as far as is possible without injuring the cow—a distance of about two feet. Then by elevating the funnel a foot or two higher than the cow the fluid can be easily poured into her. A daily repetition of this for a week or two will often cause such an animal to regain her feminine instincts.

HUGH G. VAN PELT.

There is more profit in a grunting pig than in a squealing one.

Have an extra trough in the hog-lot, besides the one you feed in, and keep a good supply of ashes, charcoal and salt in it. It means healthier hogs.

Look Him Right In The Eye



Two sorts of agents claim that disk-filled or other complicated, hard-to-wash, out-of-date cream separators are modern and easy to clean. One sort knows better, but hopes you don't, because he wants to sell you that kind of machine. Look that fellow right in the eye—tell him you do know better and that he can't fool you. The other sort of agent is simply mistaken—he does not know the facts. Tell him to look at a

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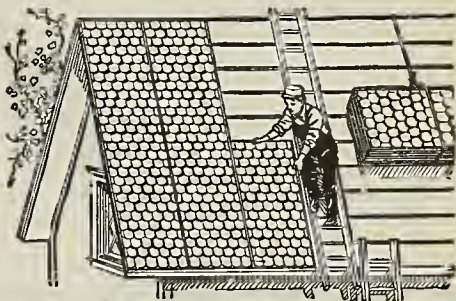
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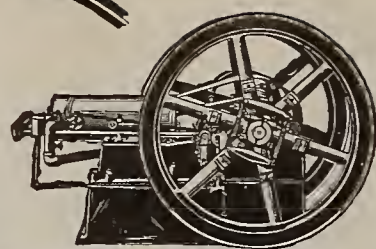
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A Balance That Fills a Long-Felt Want

AN IMPROVED form of cream balance, for use with the Babcock test, has been invented recently by Professors Babcock and Farrington of the Wisconsin Agricultural Experiment Station. The new instrument is so simple and inexpensive that any creameryman or farmer who sells cream can afford it.

Many farmers have hand separators and send cream to the local creameries or sell it to regular customers in a neighboring city. Both the buyer and the seller of cream should know what per cent. of butter-fat it contains as well as the weight delivered. The cream is often weighed on the farm scales as well as at the creamery, but the fat test is rarely made on cream on the farm, although the same centrifuge can be used as for testing milk.

For cream-testing it is necessary to have also a balance for weighing out the cream samples. Cream varies so much in density that it cannot be measured into the test bottle like milk with a 17.6 c.c. pipette, but the samples must be weighed, instead. Exactly nine grams of cream are used in each test. A balance suitable for weighing this amount of cream accurately has cost heretofore from twelve to fifteen dollars, and it was always liable to rust or get out of order. On this account there has been a pressing need for a simpler form of balance, which could be sold at a moderate price and which had no bearings or springs to wear out.

The new hydrostatic balance works on the principle that any object, floating in water like a boat, will always sink to the same level when the same weight is placed on it. The new balance consists of a brass float, weighted at the bottom to keep it upright and having a small pan at the top on which the cream test bottle is placed.

When in use, the float is placed in water in a metal can, which is furnished with the outfit. The empty cream test bottle and a nine-gram weight are put on the pan. This makes the float sink to a certain depth, which is marked by a pointer. The nine-gram weight is then removed from the pan, which makes the float rise a little way.

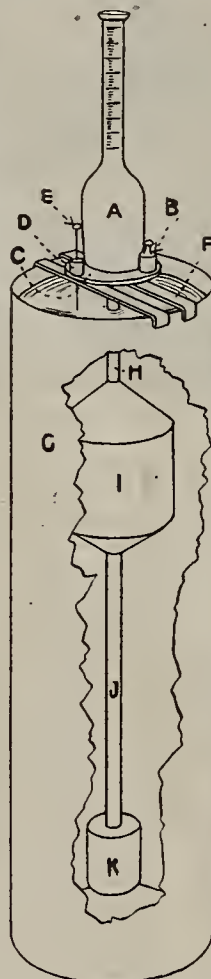
Cream is then added to the test bottle from a pipette until the pointer shows that the float has sunk to exactly the same level as before the nine-gram weight was taken off. By this means we get nine grams of cream into the bottle. Half a measure of water and a measure full of sulphuric acid are then added and the Babcock test for fat is completed in the usual way. The reading on the neck of the cream bottle must be multiplied by two to get the per cent. of fat in the cream.

In the appended diagram the details of the apparatus are plainly indicated. The can (G) is represented with the side removed to show the under-water part of the balance. The brass float (I) is ballasted by the weight (K). The empty test-bottle (A) together with the nine-gram weight (B) are shown on the scale pan (C). The pointer (E) can be slid up or down through the cork (D) inserted in the pan, so that the pointer can be adjusted to just touch the surface of the water. The two crosspieces (F) keep the scale pan in the center of the can and prevent its sinking too deep.

It is very important in testing cream to get an accurate sample. For this purpose the entire quantity should be stirred, and if necessary heated, until it is free from lumps and well mixed. A pipetteful is then taken out while the liquid is still in motion, and nine grams of cream are weighed in the test-bottle, using the balance as directed above. Cream is easiest to sample when it first comes from the separator, before it has had time to become partly churned or frozen or dried on the sides of the can.

The hydrostatic balance is a thoroughly practical instrument for use by creamerymen, who test many samples a day. The weight of the float prevents much of the vibration which is common to other kinds of cream balance, and enables the weighing to be done quickly and accurately.

The new balance is fully described in Bulletin No. 195, of the Wisconsin Agricultural Experiment Station, Madison, Wisconsin. PROF. J. L. SAMMIS.



Farm and Fireside, August 10, 1910

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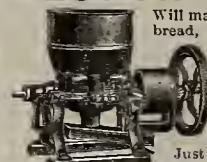
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Live Stock and Dairy

Founding the Flock

ON COMMENCING to establish a flock of mutton sheep or to improve one already owned, the truth of the two following statements may be taken as absolutely proved: The ewes, of whatever breed may be chosen, should be as nearly pure blood as it is possible to obtain them, and no crossing should be thought of save for the purpose of eradicating some defect or to introduce into the flock some specially desirable quality in which it is deficient. The second point is that the ram introduced for such purpose must be of pure blood of his own breed; and be possessed in a marked degree of the points desired to be introduced.

To get the best financial results from a flock of mutton sheep it is essential that they combine a good fleece with a good "leg of mutton." The certainty and rapidity with which high-bred animals will grow and put on meat as compared with the progress made in that direction by scrubs, on the same amount of food, has been established by innumerable scientific experiments as well as by practical farm experience; while as regards the weight and evenness of quality of the fleece, though many marked differences are to be noted among the various "down" breeds, the pure-bred animals of any one of them are, beyond any comparison, superior to any of the native or scrub breeds.

The Mothers of the Flock

Since the production of good milk in large quantities is the first quality to be looked for in a ewe, as well as the freedom with which she encourages her lamb to suck, the shepherd's personal acquaintance with her during at least one lambing season is most desirable. This, therefore, makes the selection of breeding ewes somewhat of a lottery; for style and shape are not always the qualities most to be desired in Mrs. Sheep any more than in Mrs. Anybody Else. Of course, it is not advisable to encumber oneself with too many old ewes, though they often make the best and most prolific mothers up to five or even ten years old, especially for the rearing of early lambs. All that is left to the buyer, then, is to see that the easily-recognized peculiarities of the breed he is selecting are present in every member of the bunch of ewes, and that a fair average of them are characterized by the possession of good, lengthy bodies on short legs, broad backs and wide hips, with a straight top line of the back, and that peculiar high-bred look of the face and head which in all animals distinguishes the female from the male—a look which all animal-lovers easily recognize. Still one must bear in mind that the thinnest and scrawniest-looking ewe has often taken on that unlovely appearance simply because she is a good mother. She may look poor, but will never lose the marks of good breeding if she ever had them.

Thus the buying of a lot of breeding ewes is largely a matter of judgment and experience, which if a man feels that he does not possess, I would advise him to consult some neighbor who is known to be blessed with them. It is to be remembered that one is not very liable to jump into a perfect flock of sheep, for men do not always send their best to market; but in one or two generations the careful flock-master can breed just about what he desires, often from rather undesirable-looking ewes—just so long as the breed is right.

Selecting rams is really easier because the points which constitute a good one are on the surface, and can be recognized by eye and touch, with the one most important exception that the pro-creative faculty is always uncertain. One would naturally suppose that a ram which has been a great prize-winner would be a most desirable purchase for breeding purposes, whereas, as a matter of fact, the unnatural life he has led generally has a tendency to render him incompetent in that respect.

Valuing Sheep With Eye and Hand

And here I want to be allowed to be a little discursive, since I have a good end in view. In my days in England, "some forty years ago," I do not think that any men in the world could be found as good and close judges of meat-producing animals as the butchers; for the use of weighing machines, as between the farmer and the butcher, was utterly unknown, and a constant rivalry existed between them, as to which of them could form the closest estimate as to both live and dead weight. Buying and selling in those days, except of very large lots, were mostly between the farmer and the butcher.

In my own case a butcher would come to me from a neighboring city wanting a

score or two of wethers. We would go into the field where the shepherd, with his clever dog, would drive the sheep into a corner and "hold them up" there. Mr. Butcher would dive into the closely-packed flock, catch a sheep and poke his four fingers just over the base of the tail, which should be covered with a cushion of firm flesh; he would then pass his hand over the "leg of mutton," and feel the flank. Having pressed suddenly and heavily over the kidneys, where flinching would denote something wrong, he would feel along the backbone, which, in a ripe sheep, should be well covered; then behind the shoulder for the depression which should not be there, span the neck, look at the face and then, perhaps, with a deft twist of knee and wrist turn the sheep over on its back. If satisfied, he would tell the shepherd to "turn him out," which the man would quickly do by aid of his "crook," while the dog quietly held the flock together.

The butcher would repeat this process on three or four specimen sheep and then pick out the rest of the required number without laying a hand on them. The doomed lot would then be held up in the corner by dog and shepherd, while the rest of the flock scampered off with many baas! After some dickering the butcher would name the price he would give; I would raise him ten to fifteen per cent., as a matter of course, and the bargain would be sealed by a peculiar clapping together of our right hands, and I never knew a bargain thus sealed to be departed from. Sometimes, out of curiosity, I would go down to his shop, and get him to take down and weigh an average carcass or two of the lot; and it was astonishing to see how closely we had got at the weight.

I have told this story of bygone ways, which must seem strange to our modern men of stock-yard weights and scales, because I wanted to show the points of a sheep whereby those good judges made their estimates of weight and value.

It is largely by these same points, with a few special ones beside, that the ram can be judged. Those special ones are, beginning in front, a good broad, bold face; eyes that will look into yours without flinching; a head well set into a thick, powerful neck; plenty of room for good heart action; a straight top-line of the back, which should be broad and well covered with meat, firm and elastic to the touch. Since the leg, the rib and the loin are where the top-priced meats are found, it is of the highest importance that these points should be well developed in the ram. But, above all, in the choice of a ram, a bold, lively, healthy and, what we should call in a man, a manly character should be looked for as well as a very clearly-defined development of the special marks of his breed.

The fleece, both in ewe and ram, should cover the entire animal with a dense coat

of good length, fineness, softness and elasticity, all of which qualities are likely to be present if the yolk is abundant but not too thick. Variety in the wool covering different parts of the body is detrimental; all should be alike as nearly as possible in quality, texture and color. In all the "down" breeds this uniformity in the pure-blooded animals is very distinctive. In the Shrops and some of the best Oxfords this covering of wool extends from the nose to the knees with remarkable uniformity of quality.

JNO. PICKERING ROSS.

Besting the Hog-Lice

UP to this year my young pigs have been badly troubled with hog-lice. Although I killed the lice on the old hogs repeatedly with kerosene, in a few weeks there would be lice again on them sufficient to infest the young pigs. The trouble was that, while the kerosene would kill every louse it touched, there were sure to be some nits left to hatch out or else a few lice escaped and the oil was soon gone.

Last spring I separated my sows into pens a few days before they were due to farrow and covered their backs with a mixture of kerosene and hog-lard. The lard stayed on for several days. When the oil was about all gone from their backs, I applied it again. Not a louse was to be found on either the sows or their pigs until the pigs were weaned, nor have there been any since. The hog-lard-and-kerosene mixture is a much more satisfactory lice-remover than kerosene alone and it is not so hard on the hog's skin.

A. J. LEGG.

Sheep Versus Sassafras

A WRITER in a certain farmers' journal says that if a man has a field which is infested with sassafras there are only two possible ways to get rid of the pest; one is to move away from it, and the other is to die and leave it. He is away off. I know, for I have had experience. The proper prescription for the above trouble is sheep. Sheep are very fond of the sassafras leaves, and the leaves are very nourishing to the sheep. Sheep enough on a field to keep the sprouts well cleaned of leaves will thoroughly clean it in two or three years.

A long term of years spent upon a little farm in eastern Tennessee, where sassafras is plentiful, taught me this valuable lesson. There is good money in the sheep proposition, too, while there often is none in moving away, and never any at all in dying and leaving the place; besides, where this plant abounds it often flourishes in the graveyard.

M. G. RAMBO.

I want to tell you how I enjoy every department of your paper.—Mrs. A. W. Kishbach, Nescopeck, Pennsylvania.



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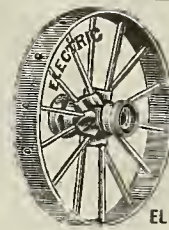
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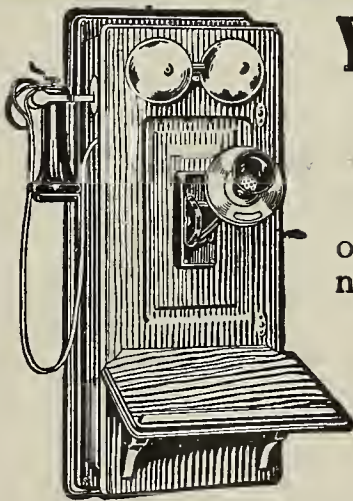
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The Condition of the Crops

WHAT good does the government crop report do you?

Can you tell anything about the probable trend of the markets from the report?

Probably not. Probably the report does you no good at all. In fact, a report on the harvested returns of the fields of the other countries of the world would come too late to help with knowledge of what demand is likely to be. There seems to be more benefit to the speculators in products than good to the growers of them in the elaborate system of government reports, for which the speculative world waits so breathlessly every July.

Corn according to the report this year is three and nine tenths per cent. poorer than last year, but is about up to the ten-year average. But how does the knowledge help the farmer? He can't tell how the expected shortage will affect price. Nobody can. Winter wheat has yielded a shade better than the average, but the spring-wheat crop has been burned up by drought so that all wheat averages eight and a half per cent. poorer than the ten-year average. But unless we know how the wheat of the Balkan provinces, Russia, Siberia and Canada is turning out, and what the yield was in South America, Australasia and India last year, and what the acreage now sown for next year is, and what the prospects are, how does it help us to know this? We sell on the Liverpool basis, and Liverpool buys of all the world.

Oats are off on the average two and a half per cent., barley nearly fifteen per cent., and rye three per cent. One would think that good malting barley would be worth holding on that showing. So with flax-seed, which is twenty-six per cent. poorer in yield than the average, but with a greatly-increased acreage. Rice conditions are only three per cent. poorer than the average. Tobacco is about an average. Hay is five per cent. poorer than in 1909, but hay is, like Hancock's tariff, a local question always. The drought has got to the Kafir-corn and knocked off five per cent. of its quality—or maybe it was something else. Pastures, on the average, are ten per cent. off color—but we know a lot of them that are a total loss with no insurance. With all the drought in the West, potatoes are only four per cent. below the average—maybe the wet season in Maine made up for the dry one in Nebraska. And potatoes are largely a local question, too. So are sweet potatoes which show up pretty well—only two per cent. below the average.

Peaches are better than usual—by a shade. Apples are only twelve per cent. below a ten-year average—and this in spite of the frost scare.

We won't go over the list—it's too long. We think every farmer should study the crop reports just to give himself the feeling that he has done the best he can to be intelligent. But the real knowledge he needs will never be obtainable until the nations of the earth all coöperate in getting and publishing complete data as to yields and prospects for all the world. And the only man who ever came before the nation with any such proposition was ruthlessly turned down by our government.

* * *

Geese and duck raisers should have lots of pluck.

Time is a repetition of now. Space is a continuation of here.

Some people know how to patch together two half truths in such a way as to make one whole lie.

To set out a tree is to make the world more beautiful. To take care of it after it has been set out is to bring a blessing to the people in the world.

The man who makes the most of his opportunities is the man who makes the most of everything that comes his way. So much that comes his way is an opportunity in disguise.

You may expect a bumper crop of mosquitoes if you leave them breeding-places in the shape of stagnant pools of water, old clogged drain-ditches, damp caves or cellars, foul water-barrels, and old cans and buckets lying around partly full of water after a rain.

Samuel B. Green

Only five days after the mail had brought his manuscript for the Fruit-Growing page of this issue, word came to us that Prof. Samuel B. Green was dead. We are sure that our readers will share our deep sorrow and regret at the passing of this friend and long-time associate of FARM AND FIRESIDE.

Professor Green was born in Chelsea, Massachusetts, in 1859, and graduated at the age of twenty from Massachusetts Agricultural College. In 1888 he accepted the professorship of horticulture and forestry at the University of Minnesota, a position he held until his death. The additional honor of appointment as Dean of the Minnesota Forest School was recently conferred upon him.

He had been affiliated with the work of this paper for twenty-two years.

Will This be a Lesson to Dairymen?

ON JULY 10th the pastures of Iowa and Minnesota were so dry that they were frequently fired by the sparks from the railway-engines. Dairymen in the trade territory of the Saint Paul and Sioux City stock-yards, and others whose pastures had failed had thrown so many animals on the market as to break local records as to the numbers handled.

How long will it take us to learn that this is a possibility any year? In the absence of irrigation, pasture is something that cannot be depended upon alone as a basis of dairying. Almost every year there is a shortage, and in every farmer's lifetime there comes a famine. The remedy is plain. Every man who has pasture should supplement it with soiling crops or ensilage. There is probably no farm in the afflicted region which might not have produced feed for its cows if forethought had been exercised. August is almost as certainly a month for feeding as December. An acre in rape, sorghum, fodder-corn, cow-peas (in the South), millet, vetch or other soiling crop is worth more than ten acres in pasture at such a juncture as this. If your foresight has not been exercised this year, let your hindsight get into the game in 1911.

* * *

A lazy man sometimes gets lots of work out of his boys.

A wise man takes advice, but only a fool acts upon all that he hears.

Some ardent enemies of monopoly always monopolize the conversation.

Man needs to buy a piece of land but once, after which he can sell from it year after year.

It doesn't pay to tinker up old tools or harness and invite disaster. Better work, and more of it, can be done with new articles.

A substantial, hog-tight fence around the whole farm would save the farmer much valuable time and the friendship and good-will of his neighbors.

Mr. Lever Got His Paper

HON. A. F. LEVER, M. C., of South Carolina, in a letter to the editor, asked for our editorial notice of the Beef Trust efforts to pull down the bars and let in fraudulent butter. Mr. Welliver's Farmers' Lobby article in the July 10th issue was our reply. We have caused a copy of that issue to be sent Mr. Lever according to his request and hope that he is satisfied. Whether his constituents are equally satisfied with his attitude, hostile as it is to the budding dairy interests of South Carolina, is a question for them alone; but the entire nation is concerned with the fact stated by Mr. Welliver, that Beef Trust literature is being sent out by Mr. Lever—literature printed by the Beef Trust and furnished, lock, stock and barrel, to Mr. Lever, lacking nothing but the congressman's frank to carry it through the mails. Mr. Moxley, of Illinois, seems not to be the only Beef Trust man in the House.

The Power of Summer

IN EARLY June, all over the corn belt, the great crop seemed doomed. It was little and yellow and spindling. Much of it had been replanted. Much more of it ought to have been for it was—and is—a poor stand. Great areas of it were planted in June, and on the tenth of the month millions of acres showed no green rows to the eye. Things looked gloomy and depressing.

And then the annual miracle happened. Summer put her mighty shoulder under the load and it heaved softly to the pressure. Where last night the fields looked black as November, faint lines of emerald glimmered through the steamy heat of the morning. The panting teams began to swing slowly at the turn with salty stripes down their sides and lather about their flanks and under the collars and tugs. The plowman's face smarted in the glare from the oven-like earth and, almost before we knew it, there stood slanting from the prairie wind the dark green lines of soldiery in battle array against hunger, the serried ranks of the corn, knee-high, shoulder-high, tasseling out, silking, laid by! Summer had done the impossible again, and again agricultural wisdom was justified of her children.

Just now, summer seems to be overdoing her work a trifle. The corn-blades are curling in fields where the tillage has not been frequent enough, where the shovels have run so deep as to cut off the roots, where the humus has been taken out of the land by bad farming or where the subsoil is stony or gravelly. But a large part of this is our fault, not hers. You can't expect an instant stop in such a mighty lift. And, anyhow, how much better it looks than in the first week of June!

* * *

"Ours is no common lot," as the pigs said when they got into the alfalfa-field

The farmer should beautify everything he touches, and touch everything that is not beautiful.

A New England paper suggests that the red squirrel eats, or destroys, the nests of the brown-tail moth. The brown-tail is spreading and is one of the most serious menaces to orchardry. It infests forests, as well as orchards, and is hard to combat for that reason. It will never be controlled, probably, save through its natural enemies. The government of the United States has done something in the way of introducing insect foes of the brown-tail from Russia and eastern Asia, but it is too soon to say with what success. The red squirrel is respectfully requested to enlist for the war. If any of our readers can give any information leading to a rating of the squirrel as a soldier in this cause, we shall be glad to hear from them.

Scared or Starved?

AS THIS is written, the spring wheat of the Northwest seems to have suffered dreadfully from drought. Many fields are total losses. In a country devoted to one crop mainly this is worse for the wheat-growers than if it were a mixed-crop region. Individual cases there are everywhere of people with all their eggs in any basket that happens to be kicked over by Mother Nature, and such always call for sympathy, but it is a public calamity only when a whole region comes under the rule of a single product.

Whether or not a calamity has occurred in the fields of the Northwest remains to be seen when the threshing comes on. Calamity is always taken full-length in the most conservative of cameras, while good news is snapped with a pocket kodak. We thought the fruit crop ruined in April; but while Nature seeks the life of every shoot and blossom and swelling fruit, Nature also strives to bring forth seed; and out of the frost and snow and north winds were snatched enough to make—not a fair yield, but a considerable one over much of the nipped area. Nature tries hard to produce seed, and rallies her forces in our side of the quarrel in wet weather as well as drought, in heat as well as cold. Every blade of wheat in the droughty region will do its best and the crop may not be as bad as we fear. "A dry season will scare a man to death, but it takes a wet season to starve him." Yet, if it's dry enough, a dry season will do that, too.



The FARMERS' LOBBY.

By Judson C. Welliver

IT CERTAINLY does make a difference whose ox is gored. I was reminded of that fact recently when in Boston and a few days later, even more forcibly, while in New York.

Honestly, we farmers haven't learned the simplest rudiments of the distinguished American art of kicking. We don't even know how to make a polite protest. It takes your city chap to put up a real noise when his toes are stepped on.

Let me whisper it confidentially in your bucolic ear: Broadway has gone plumb populist, Beacon Hill is talking socialistic awfulness, and the Bunker Hill monument is sprucing up in anticipation of maybe yet another revolution sprouting on its historic slopes.

Which is by the way of preparing you for the news that New York and Boston have discovered the Railroad Question. Properly, it should be said that the railroad question has discovered them; and, honestly, bleeding Kansas never bled, or weeping Nebraska never wept, with a suggestion of the enthusiasm that New York and Boston are throwing into their howls of agony at the discovery that the railroad question, as General Hancock once said of the tariff, is largely a local issue.

Local? You would think it was local if you would listen to the wails from the commuters of gay New York and dear old Boston, as they contemplate the increase in their commutation rates. You know that while about four million people live in New York, according to the census enumeration, there are some seven million in the metropolitan district which includes adjacent sections of the states of Connecticut, New York and Jersey. A million or two of these folks live away out in the suburbs and travel to the metropolis six days in the week to do business. The railroads sell "commutation tickets" which give the privilege of a fixed number of round trips a month at reduced rates.

Well, it's apropos of these commutation rates that the metropolitan ox has been gored. For years I have been wondering when my New York friends would discover that there really was some reason back of the demand for some modest regulation of the railroads. They just smiled indulgently when a rube blew in with some observations about the possibility that the railroads might bear a little supervision. It was the sign of a mild insanity, they were sure; evidence of a sort of mania ruralensis, so to say. They doubted if it wouldn't be a good thing to disfranchise folks with such funny notions.

Metropolitan Chorus of Ouches

But you should hear 'em now! The commuters' rates have been shoved up, and the boot is on the other leg. Oh, they can see the indecency, the unfairness, the general cussedness, of the thing when it is put up to them in this direct-tax sort of way. They are petitioning the Interstate Commerce Commission and the public service commissions and every other old authority to stop the imposition. A bunch of them went in person to President Mellen of the New York, New Haven and Hartford road with their kick, and Mr. Mellen told a man from New Rochelle, New York, that the railroad would be willing to pay him a small premium every day he wouldn't go to New York. It didn't want his business; lost money on him every time he made the trip!

It didn't take the Bostonese and the Manhattanites more than twenty minutes, after the new railroad rate bill had been passed, to discover that it was an imposition of Providence to save them. They hopped right off for Washington and asked the Interstate Commission to suspend those advances in commutation rates.

The commission must have seen the humor of it. Not since the first piece of railroad regulative legislation was passed has there ever been a time when a senator from New York was anything but hostile to such foolish business. They have voted for such measures, true enough; but they don't care much for 'em and would prefer to see such nonsense stopped. Maybe the commission had this in mind; I don't know; anyhow, while it suspended a long list of advances in freight rates in all sections of the country, it decided not to suspend the increases in the commuters' rates. It did, however, announce that at its leisure it would hold an investigation of these rates and intimated that maybe if gay New York didn't get too gay, it would, perchance, do something later on for the festive old town; might order the rates reduced, if they were found altogether too altitudinous. And New York is trying its best to be cheerful with that bit of cold comfort.

The commuting rates out of New York are to a large extent interstate affairs; people going from one state into another, and the business therefore falling within the jurisdiction of the Interstate Commission. On the other hand, the commutation rates out of Boston are for vastly the greater part state rates, and the interstate commission has no business interfering with them. The people must depend on the Massachusetts authorities; and there is going to be more populist legislation considered at Boston next winter than at Lincoln or Oklahoma City.

The wires would seem to have got tangled, by the way, in connection with the announcements of administration policy about the new rate law. Chairman Knapp visited the President and it was announced that they decided that there would be no unseemly excitement about invoking the new power to suspend tariffs or rates. That announcement was occasion for some expressions of disaffection, for it was taken to mean that the President wanted to interfere just as little as possible with the plans of the roads to get more revenue, which they insist they sorely need. However, the commission, a few days later, gave out that its general policy would be to suspend all tariffs making increases affecting wide areas or large numbers of people in an important way. The contradiction between the two policies has even caused some wonderment whether the Interstate Commission has decided to take the bit in its own teeth and run its job in its own way. It has recently handed down a long series of most important decisions, ordering rates greatly reduced throughout the whole territory west of the Missouri. It has suspended proposed increases all over the country, and, in short, it is showing distinguished symptoms of determination to make itself a real factor in the general railroad situation.

Anyhow, I feel able to promise that, in view of their own ox having been gored, the people of New York and Boston are going to be a lot more sympathetic, in future, with proposals to lay the federal hand on the railroads and occasionally check up their charges.

Interesting Side-Light on Tariff Revision

It perhaps isn't important, but certainly it is interesting, this revelation about the interest which Senator Aldrich holds in the Inter-Continental Rubber Company. Senator Dolliver, of Iowa, seems to have been the first man with the bad taste to refer publicly to it. Mr. Dolliver had been variously "read out of the Republican party" because he had expressed doubts about whether the Payne-Aldrich tariff bill was the best ever, as President Taft had opined in his Winona speech. So the senator, having occasion to make a speech at Des Moines, skinned the tariff and its makers and declared among other things that Aldrich, at the very time when he was raising the tariff of rubber goods from thirty to thirty-five per cent., was one of the group of big capitalists who were organizing, under the laws of New Jersey, the Inter-Continental Rubber Company, with the purpose of making it ultimately a world rubber trust.

Senator Dolliver has been for a couple of years on the trail of the eminent Rhode Island boss. It is gossip in senatorial circles that Dolliver has cut out for himself the little stunt of "getting Aldrich;" of exposing the various selfish interests which the Rhode Islander has served at various times, during his long legislative career, and making it perfectly plain that Aldrich, far from being a broad-gauged, broad-tired statesman who wouldn't think of working ruts in the macadamized road of national business, has, in fact, been in the business of quietly fixing tariff rates and such like, with special reference to making them earn big profits for the pockets of Aldrich and his associates. Everybody remembers that Aldrich got his big financial start by consolidating the electric railroads, street-cars, interurbans and all, of Rhode Island, and unloading them, later, on the New Haven railroad. Aldrich was president of the company that pulled off that merger in Rhode Island, and made a huge fortune out of it. John E. Searles, then secretary and chief manipulator of the sugar trust, was a director in the Aldrich company, and it was common report, accepted in financial circles and never to this day denied, that "Sugar money" was provided for Aldrich to turn the trick.

Anyhow, whether the Sugar Trust financed Aldrich into the foundation of his vast fortune, it is certain that right after Aldrich made his profitable turn in Rhode

Island tractions with Searles' assistance the tariff was revised and in that revision the sugar schedule was so fixed that the trust made a good many millions out of bringing sugar into the country at a low duty—and there is no doubt that Aldrich was the particular man who had more to do with pulling off that pleasant little performance than anybody else. Suggestive, isn't it?

It was suggestive to Dolliver, and he went looking for more cases of the same kind in Aldrich's career. Somebody told him that "Uncle Nelson," as they say in the Senate, was one of the founders of the Inter-Continental Rubber Company. Dolliver couldn't get the goods; lots of people told him they had heard this, and a man from Pawtucket told them that, and it was reported in London to some other effect, and so on. Dolliver wanted the goods, and the tale goes that one day when business was light he climbed on a train in Washington, went to Trenton, examined the incorporation records and found, sure enough, that just about the time the tariff was being revised and just about the time Aldrich, as the chief-squeeze reviser, was boosting the tariff on rubber manufactures five per cent. without bothering to explain how that complied with the promise of downward revision—well, he found that just about that same time, the Inter-Continental Rubber Company had been incorporated at Trenton and Aldrich appeared as one of the incorporators.

This Inter-Continental Rubber Company has designs of doing the rubber business of the whole universe, judging by its charter. It overlooked nothing in its grant of powers to deal in rubber everywhere; to raise rubber, refine it, manufacture it into anything on earth even to necks, deal in real estate, plantations, stocks; to own factories, to consolidate rubber companies—in short, it is a big enough concern to provide rubber for the solar system and then keep an elastic attached to Halley's comet so that it will not stray too far afield. And Aldrich was an incorporator of it—Aldrich, who was just then quietly lifting the rubber-goods tariff!

This company, it appears, has about twenty million dollars of common stock and three million or four million dollars of preferred stock. Nobody knew how much Aldrich held of it, but Dolliver stirred up an awful muss by telling the story in his Des Moines speech and asking folks in Iowa how they liked to have tariffs made that way. A few days later Senator Bristow told the same story in a speech in Kansas.

Statesman and Stockholder, Too

Now comes the revelation of the financial details which the insurgent senators were not able to give. It is announced that Senator Aldrich holds no less than twenty thousand shares—about two million dollars—of the stock, and that his son, who is a vice-president of the Inter-Continental, holds about five thousand more.

The Inter-Continental has been getting quite a bit in the public eye as a result of its distinguished constituents attracting attention. It owns some tremendous plantations—one of them comprising nearly two million acres—in Mexico and is so prosperous that at the recent meeting of the stockholders it was decided to retire a large block of the preferred stock each year until it is all retired and then there will be no lien prior to the claim of the common stockholders. The company didn't deign to make any explanation of the Dolliver charge that its most eminent shareholder raised the rubber tariff in its interest, except to observe that there was no production of rubber in the United States, anyhow!

Of course, there isn't; but what does that have to do with it? What the new tariff does is this: It leaves raw rubber on the free list, so that "Uncle Nelson" can get his crude stuff into the country free. That's simple, isn't it? Then it raises the tariff on manufactures of rubber, which "Uncle Nelson's" company is going to make, according to its charter. Thus the Aldrich trust will get its raw material free of duty, but will have more protection than was ever before granted on its manufactured products—and correspondingly greater opportunity to squeeze the public for bigger profits.

All of which is related by way of suggesting an interesting conundrum. Which is the most elastic:

Aldrich rubber—

Aldrich rubber tariff—

Or Aldrich rubber-tariff ethics?

You pay your money—including the new thirty-five per cent. duty, of course—and you take your choice.

Joe and Liddy Ann

By Hope Daring

WHY shouldn't you go, Liddy Ann? It's a Relief Corps party, an' you're a member."

"Yes, but Joe belongs to the Grand Army, same as I do to the Corps. What if he should go? Wouldn't we feel pretty, coming face to face at a party, and him trying to get a divorce?"

Sary Crawford leaned forward, looking straight into Mrs. Lane's face. "Now look here, Liddy Ann. You an' Joe was fools 'nough to part at your time of life, but I s'pose that's none of my business. This is, though, an' I want you to git ready to go out to Joy Farm with the rest o' us. I told the carryall to stop here, to take on two more."

"Oh, Sary!"

"Yes, I did, and I told Marthy Joy I'd bring you. Joe won't be there—you know he hain't been a place sense you an' him quit. It's the duty of every member to go, when the Joys invited the Grand Army Post and the Corps out to their farm for a party."

Mrs. Lane did not reply at once. The two women were seated on the wide, vine-covered porch of her cottage home. She rocked softly to and fro, winking to keep back the tears. She was so lonely, so tired of being alone! Why should she not, for one day, forget the odium that was hers, because of the pending divorce suit, and take her old place among her friends? Suddenly she said:

"I'll go, Sary. You excuse me while I put on my black and white dimity. It's lucky I baked this morning. I'll take two loaves of my salt-rising bread. Some folks sets store by my salt-rising."

"My! How Joe used to brag 'bout it," Mrs. Crawford began reminiscently, but Liddy Ann hurried away.

She was not gone long. When she returned she was arrayed in the dimity, and her iron-gray hair was smooth and shining. She had packed the bread in a basket, covering it with a snowy towel. Before sitting down, she locked the door and hung the key on a nail behind the shutter.

"There! I'm ready. Why, Sary, I believe I am glad to go."

"Say, Liddy Ann, whatever begun the trouble 'tween you an' Joe? You used to be so happy you was 'most spoony, and you—"

"I don't know just how it begun," Mrs. Lane interrupted her friend to say. "You know he was a widower living with his children, and I had the home, so he came here. He put on a new roof, built this porch and done lots o' things. His children fretted 'cause he put his money on my place. At first we laughed, but after a time—well, he wanted to keep chickens, and I wanted the back lot set out to small fruit. I thought he done too much for his children, and he thought I paid too much to the church. So it went on until we just had to quit."

"An' now you're both miserable. There comes the carryall."

Mrs. Lane was warmly greeted by the elderly women who filled the long seats of the springless "carryall." A little good-natured crowding made room for the two.

"I didn't s'pose you'd feel like gittin' out, Liddy Ann, seein' as how things air with you and Joe," said Mrs. Allen a little maliciously.

"Well now, I don't see why she shouldn't," Mrs. Crawford cried hotly. "Liddy Ann's friends 'll stand by her in this. 'Sides divorcin' hain't like some other things I could mention."

Mrs. Allen's face colored, but she said no more. It was very evident to every one there that whoever attacked Mrs. Lane must also reckon with Sary Crawford.

Joy Farm was only a mile out. When the carryall turned into the drive that led to where, close set around with apple-trees, the old farm-house stood, a rousing cheer went up from the score of old veterans who were already congregated on the lawn.

"It's the commissary department," some one cried, seeing the women's baskets and bundles.

"Come and help us out, some of you boys," Mrs. Myers demanded.

Several of the men started for the wagon. Mrs. Crawford felt Liddy Ann's hand upon her arm.

"Joe's here; he's helping Jane Myers out this minute. Sary, you got me into this and now you've got to stand by me. Come on."

Meekly Mrs. Crawford followed Liddy Ann. "Eh! Where's the rest?" called Joe Lane in a ringing voice. "I say you—Why, it's Liddy Ann!"

He turned and walked back to where his chum, Mike Waverly, was sitting. "Mike, she's come; Liddy Ann's here. Now what can I do? You said—"

"Of course I did, because she has not been a place since you left her. Just like a woman! Well, Joe, brace up. You owe it to the rest of us to make the best of this. And you needn't look at her, nor speak to her."

At the same time in the sacred "spare room," where the women were laying off their hats, much the same advice was being given Mrs. Lane. She took it meekly, escaping as soon as she could to the big kitchen, which was already redolent with the odors of roast beef and steeping coffee. The hostess was bustling about, fully aware of the importance of her position.

"Now, Liddy Ann Lane, I'm right glad you brought salt-rising bread. My! There's victuals enough here to feed an army. No, Della, don't put the chopped beets in that dish. Liddy Ann, you're not going to do a stroke of work; finding Joe here has upset you."

A little later Mrs. Lane made her way out on the porch which was embellished with many small flags. Sary found her there, half hidden behind a vine-clad pillar.

"Land sakes, Liddy Ann! Your eyes look as if they was a-seein' a funeral! Do come and set down."

Mrs. Lane grasped her friend's hand. When she spoke it was in a whisper. "I want you to look at Joe! Sary Crawford, I don't believe his clothes has been brushed in a month, and they don't look as if they had ever been pressed. How his beard needs trimming! I always attended to that. It's plain to be seen that his son's folks don't pay much attention to him."

"Well, 'tain't as if you cared," was Mrs. Crawford's consoling reply.

Joe did not enter the house until the call to dinner came. As he walked along he said, "Mike, don't you think Liddy Ann looks bad? She's thin and she has grown older."

"That's an ailment common to us all. I reckon it's hard for Liddy Ann to work her garden. I saw her trying to split wood the other day, and she went at it the same as any fool woman."

"You don't suppose they'll set me down near her?"

"Trust Martha Joy to see to that. She knows that the folks wouldn't think it right for you two to sit side by side."

Two long tables were spread, one in the sitting-room, the other in the dining-room. Mrs. Lane had coaxed for the privilege of waiting and eating with the helpers, but her sad face made the hearts of some of her friends very tender toward her. They did not realize that their openly insisting upon making a martyr of her only increased her embarrassment, so they would treat her as an honored guest, instead as one of themselves.

"Indeed, you'll not wait!" Mrs. Joy declared. "You'll be seated at the head of the table in the dining-room. Joe Lane's all right, but I believe in women standing up for women."

Such a dinner as that was! Roast beef and mashed potatoes, all kinds of breads, vegetables, pickles, sauces and salads. For dessert there was what Mrs. Joy's high school niece, who was spending her vacation on



"'Oh, Joe! Don't die!' she moaned. 'Live and come home'"

the farm, declared Washington Irving would have called "two whole families of pies" and there were as many kinds of delicious cakes.

Sary helped wait on the table. As she passed the bread around, she said in a low voice, "I don't s'pose, Joe, you'd care for any of this. It's Liddy Ann's salt-rising bread."

"Yes, indeed I would, Sary. I've been wanting some of that bread for a month."

"Now you hain't et nothin'," Sary said to Mrs. Lane a few minutes later. "You ought to have seen Joe fill up on your salt-rising bread. Why, he didn't eat hardly a thing else."

"I s'pose he didn't know that I made it."

"Indeed he did, for I told him myself, and he said he'd wanted some of it for a month. You better have a piece of the cream-pie, Liddy Ann."

Dinner over, many hands made quick work of the dishes. Then the whole company gathered on the lawn. Already the old veterans were deep in reminiscences of their campaigns.

"I don't see why Joe don't tell about his Gettysburg experience," Mrs. Lane said to Mrs. Crawford. "It's a story of a hero and is good enough to print. I don't think much of Tom Rose's account of his escape from a squad of Confederate soldiers; he never tells it twice alike."

Sary stole away and was soon bending over Joe's chair. "She didn't spect as how I'd tell you, but Liddy Ann says she wishes you'd tell your Gettysburg story. Them yarns of Tom Rose's makes her tired. She likes to think as how there was some heroes as wore the ol' blue."

The veteran's wrinkled face brightened. "Liddy Ann always did set a great store by what I done at Gettysburg. I'll tell the story as soon as I get a chance."

Mrs. Crawford walked away. To her surprise Mike Waverly rose and accompanied her.

"Now see here, Sary," he began, "I want to know what you are up to. Are you trying to get Joe and his wife together again?"

"If that hain't just like a man. You don't know Liddy Ann Toby Lane as well as I do, or you wouldn't ask such a question, and I guess as how Joe's a little more contrary than she is. No use of any of us tryin' to do anything."

"Well, what are you up to then?"

"Mike, it's be'n five year sense my man died. When I think of any other woman standin' my loneliness, jest 'cause she's contrary, it seems my bounden duty to show folks what fools they can be."

The story-telling went on for an hour, and then Mrs. Joy said:

"Let's sing some of the songs we all know. Joe, you start 'Star-Spangled Banner.'"

Mr. Lane had a strong, clear voice. He led in the singing of several familiar songs. If there were no artistic rendering of the melody, there was hearty appreciation of the sentiment, as well as a great amount of unnecessary energy.

After a brief pause Joe began to sing "Home, Sweet Home." As he sang on, he leaned his grizzled head against the silvery-brown trunk of the apple-tree behind him and closed his eyes. He expected the others would join him, but they did not. The old man's voice was not quite clear nor steady, but he kept on until he reached the words

An exile from home, splendor dazzles in vain;
Oh! give me my lowly thatched cottage again.

Suddenly he opened his eyes and looked across to where Liddy Ann was sitting. She rose, her face wan and convulsed with grief. As she started for the house, her head bent low, the voice of the singer wavered and broke.

For a moment there was an awkward silence. It was Joe himself who bridged it.

"I'm not doing the solo act to amuse this crowd. What's that, Louise?"

"Oh, Uncle Joe! Come and move the ladder so we can get some more cherries," coaxed a little girl, and Mr. Lane sprang up, glad of any interruption.

The Joys had told the children who were present that they were welcome to the cherries on a gnarled old tree that stood near the well. Even after the ladder was moved, the little maid could not reach the branch she desired. The ripest and prettiest of the cherries were at the very top of the tree, and Louise's efforts to reach them were all in vain.

"Let me get them for you, Louise," and Joe went easily up the ladder. He reached the top, leaned forward to catch the branch, lost his balance and came crashing to the ground, bringing the ladder with him.

Liddy Ann had just come out on the porch. She saw her husband fall and was one of the first to reach his side. The others crowded around, but she pushed them all aside.

"Stand back! He is mine, mine!" she cried in a ringing voice, as she bent over him, her white, terrified face close to his.

There was an excited chorus of loud voices. A dozen things were proposed. Liddy Ann kissed the unconscious man's face, softly calling his name. His eyes opened, and he stared blankly at her.

"Oh, Joe! Don't die!" she moaned. "Live and come home. I was all to blame. We'll raise chickens, and I don't care about the money; your children can have it all, if only I can have you."

Joe sat up, clinging to his wife's hand. "God bless you for saying that, Liddy Ann! No, I'm not hurt, just some sense knocked into me. Of course I'll go home. Never mind the chickens, dear. You shall have your small fruit, and we'll give the church fifty dollars as a thank-offering."

For the Dull and Dreary Day

WHEN the frost is on the heather,
And the skies are dark and grim,
And the bleak and wintry weather
Makes the light of heaven dim,
None the less my soul rejoices,
For I've got a little way
Of reserving bits of sunshine
For the dull and dreary day.
Little bits of sunny hours,
Little rifts of golden light,
Little hints of summer flowers
Will illumine any night.
Little tiny bits of fun-beams
Will light up your weary way
If you only save your sunbeams
For the dull and dreary day!

When the cares of life befall me
And the clouds above hang low,
There is naught there to appal me
As along my path I go.
Every trouble, every sorrow,
Like the sea-mists fade away
When you've saved your bits of sunshine
For the dull and dreary day.
Little glints of golden treasure,
Little bits of mellow sheen,
Matters not how small the measure,
Hold the spirit fresh and green.
Little rays like elfin-spun beams,
Full of frolic and of play,
Come to him who saves his sunbeams
For the dull and dreary day.

—John Kendrick Bangs, in *Ainslee's Magazine*.



The Dispenser of Justice

By Bolton Hall

Illustrated

by

Fred E. Lewis



"Who Art Thou That Thou Shouldst Judge?"

THE king had not slept well, nor had he enjoyed his breakfast. A dream had disturbed him, a strange dream of which he could recall nothing, but which had left a tantalizing effect of vividness. Now, as he donned his robe of justice before entering the Judgment Hall, he was startled by a sound that recalled his dream.

"What meaneth that?" he demanded of the Chamberlain of the Robes.

"That, your Majesty," replied the chamberlain, who was young and but newly appointed to his high office, "that is the wailing of the woman whose son is to be tried for murder this morning."

"It is not meet that one should mourn thus for a murderer," said the king sternly.

"It is her son, my lord," murmured the chamberlain softly, "and she saith he has had no chance."

The king frowned. "Mine is a rich kingdom and I am a just ruler. How then saith any that one of my subjects has had no chance?"

"She is a strange woman, my lord, and venturesome. She asketh an audience of thee that she may show thee the truth of her complaint."

"Why hath not her prayer been granted?" asked the king.

"The Council of Wise Men decided not to trouble thee with her complaining, for thou seemest ill at ease, my lord," answered the chamberlain.

"Thou art young, lad, and thy heart rules thy head; how hast thou dared what the wise men refuse?"

"I am thy servant, my lord, but I love thee. It may be that to share the grief of another may lighten thine own woe."

"Wiser art thou than the wise men, lad. Bring the woman hither."

The woman hushed her wailing as the chamberlain ushered her into the presence of the king, and stood before him silent. But the sorrow of her face, the poverty of her dress, the wasted condition of her frame, smote the king to sudden anger.

"How long hast thou lived in my kingdom," he cried, "that thou shouldst come before me in such guise?"

"All my days, my lord," replied the woman. "Lo, I have no other garments in which to appear."

"Then thou must be idle, wasteful or dissipated," stormed the king, "to be as thou art in a land of plenty with a just ruler."

"Not so, my lord," returned the woman, "I have toiled since I can remember, early and late; yet even with the help of my son have I barely lived."

"How can such things be?" cried the king. "Is not this a prosperous kingdom and a mighty one respected of all nations?" and he looked piercingly at the woman.

"Be not angry with me, oh, just ruler," she answered. "Couldst thou but see for thyself how we live, thou wouldst understand."

"Then," said the king to his chamberlain, "lay aside this robe of justice; there shall be no court to-day. Garb me plainly, I pray thee, and this woman shall show us how she lives. Then shall I know how to deal justly, in her case."

So the court was dismissed, and the king, the chamberlain and the woman went privately out of the palace into strange winding paths that the king had never before trod.

Through stretches of smiling field, pleasant woods where deer browsed, over goodly land where never plow had been, the woman led the way in silence, until at last they came upon a

maze of streets whence foul odors arose and the dwellings huddled together in a grim effort to hold each other up. The very provisions in the shops looked as wan as the people who sold them. Swarms of elish children squabbled in the gutters among noisome heaps of refuse; the few men and women they met were either dispirited or hardened; nowhere was there a sign of gladness in living. The king felt depressed before such hopelessness.

The woman led them up a dark stair-case where on every side was heard the whirl of machines. She opened doors that they might look in, but none stopped their work. Past-faced men and women bent over their machines, guiding their work; little children pulled long threads from garments piled about them on the floors; while from some inner darksome recesses came the sounds of stertorous breathing. These were the night workers taking their heavy sleep by day in the same beds where the day workers tossed by night. This and the frequent sharp cough of some worker were almost the only sounds to be heard above the whirring of the machines.

"Are there no laws governing these factories?" asked the king.

"These are not factories, my lord," answered the woman, "these are the homes of the workers."

Floor after floor in house after house the three visited, until the king could bear no more. Then, turning to the woman, he said almost roughly, "What wouldst thou?"

"My son's life, my lord. He has had no chance. All his days have been spent as thou seest. One by one the others died, only he and I lived on. Wages have grown less and the cost of living greater. We were starving and the work was poorly done; it was refused; there was no pay; my son was mad; he struck; it was all over. He was mad from work and hunger, as are all these people. Thou hast never known want or hunger, my lord; who art thou, that thou shouldst judge?"

Then the king started, for, lo, that had been the burden of his dream. Scenes so unfamiliar that he could not recall them had passed before him, and as each had vanished a voice cried, "Who art thou that thou shouldst judge?"

The king turned away, saying nothing, but as he journeyed to his palace the chamberlain saw his eye rove over the vast stretches of field and forest, and he saw his lips moving. When they had once more crossed the wide stretches between palace and hovels, the king turned to his chamberlain and, waving his hand toward the fields, said, "Until it hath yielded abundant harvest to supply the wants of the people, there shall be no more court held in the land. Who am I that I should judge, unless conditions first be equal?"

And the chamberlain rejoiced that the king had awakened.



at last they came upon a maze of streets"



there shall be no more court held in the land. Who am I that I should judge?"

The Keeper of the Home

By Pearle White McCowan

SOME one has said that "a home is the nearest like heaven of any place upon this earth," and this is the way it should be. There can be nothing in this old world of ours with the power to so sadden the heart of our all-wise, all-seeing heavenly Father as the sight of a home made wretched by its turmoil and strife—unless it be the utter breaking up of that home.

Then, when I think that it is in the hands of the women, the mothers and wives that he has placed the sacred responsibility of keeping those homes, I feel like shouting forth a rallying call to all mothers and homekeepers to strive with all their God-given talents of tenderness and love and firmness against every disturbing element that would enter into those homes.

Here and there are women who are—or who fancy they are—mismatched. The perfect qualities which their imagination gave to the man of their choice before marriage have not held good in the closer companionship that the years have brought. The polish has been rubbed off by the grind of the years and the toil, leaving a coarseness or a moral weakness or a failure in one way or another that makes a sore spot in the wife's heart. And there is just as often an ache in the husband's heart over the changes which time has wrought in the attitude of his wife toward him or toward her home.

Perhaps the first and most frequent mistake of the young wife is the telling of her difficulties. With a very natural longing for sympathy, she goes to her mother or sister or particular friend with the story of her husband's shortcomings, and with the telling and the sympathy received, the grievance grows in her mind to undue proportions, and sooner or later another is

added and another, and another, and, before either of them realizes it, a breach has grown up between them.

I have before my mind two pictures. One of a home made wretched for years by this constant nagging. The husband had faults, of course, though no more than many an average man, but the wife allowed herself to be vexed by them and to show her annoyance. He returned her unkindness, and now the home is broken up, the mother gone, saddened and embittered toward all the world, the father heartbroken—and the children—God help them. Can there be anything sadder than this?

The other picture is that of a woman now white-haired and gentle-faced. Young, proud and full of ambition, she entered upon her married life with high hopes, which gradually faded away. They were blessed with many children. However, they were poor, and the wife found it necessary to take in work, while her husband spent many of his days contentedly smoking by the fire. Her children grew to be her one hope, and education for them was her dream, but it was never realized. Money was scarce and some of them inherited from their father a distaste for study. But through all the years of disappointments and sleepless nights she held fast to her ideal of home.

She has stood through all these years, through ill health and poverty and disappointments, noble and strong, yet withal tender and gentle, the guardian of the family's happiness, the keeper of the home. Could there be a nobler work than this?

God knows, what we sometimes forget, that any one may be a housekeeper, but it takes a womanly woman, with a courage born of a high resolve and a boundless capacity for self-denial, to be the Keeper of the Home.

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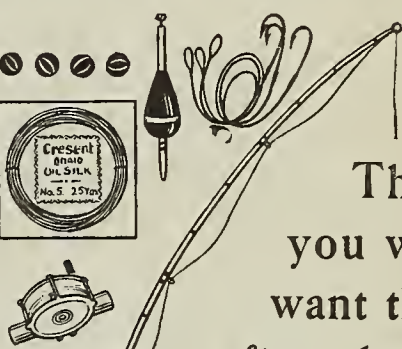
"She seemed to relish it, was soon conscious of her surroundings and began to gain health and strength so rapidly that in a short time she was well, playful and robust as if she had never been ill."

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OUR YOUNG FOLKS



The Cripple and the Waif

By Mary Minor Lewis



Muddy Creek and of the low wooden bridge which crossed it beneath the overhanging willow trees. Beyond the creek were miles and miles of pine-woods, and out of these, by a narrow bridle-path, rode a man on a mule.

From the store porch Gervas Bingham, the storekeeper's crippled boy, watched with wistful eyes the travelers who came and went. What else could the poor child do? His bad hip would not let him run and play like other boys. His father was always very busy and the boy very lonely.

The man crossed the bridge, emerged from behind the giant wood-piles, dismounted at the horse-rack beneath the chest-nut tree and tied the mule to one of the branches. Then, as he crossed the open space toward the store porch, the crippled boy noticed that he was followed by a yellow dog of the unmistakable "cur" variety. As the man started to enter the store, the dog attempted to follow him; whereupon he turned and, with an oath, kicked him again and again, then slammed the door in his face!

Gervas saw what happened and his pale face flushed angrily. He stooped and picked up his little worn crutch and limped into his father's store.

The stranger had joined a group of other idlers in the rear of the shop. Gervas walked straight up to the man. Leaning on his crutch he looked him full in the face.

"I am very little, sir," he said, while his face went very white and his lips trembled, "but I want to tell you that you are a coward, sir! A cruel coward, to treat that poor dog so. Even a cur-dog must be ashamed of such a master!"

The men sitting around the store all laughed aloud, greatly amused at the sudden and violent fits of anger which Bingham's little cripple sometimes displayed.

"The cur's not mine," growled the man. "He found me eight miles below here and just would follow me." The boy hobbled away. He found his father in what he called his "office."

"Father," he said as he leaned against the desk-chair, "there is a dog out by the wood-pile, just a stray dog and ugly, but I want him."

"All right, son," he answered kindly. "Anything you want that I can give you. We understand each other, don't we, boy?" And he patted his head.

The child smiled his radiant, winning smile, which made his delicate face almost beautiful. All trace of anger was gone as he limped out to the wood-pile to look for his new pet.

Old John Bingham was known throughout the country as a hard man. Starting in life at the bottom of the ladder, he had worked

up from an apprentice to the ownership of the best general merchandise store in that part of the country. He had married late in life and within the year his wife had died, leaving the desolate man what later became to him the great joy and passion of his life—the crippled boy Gervas. He loved the child with all the strength and tenderness of his hungry heart.

Gervas found the strange cur hiding under one of the wood-piles and coaxed him out with kind words and many pleadings.

He fed him and gave him some water, and at night he made a bed for him with an old quilt which he spread on an easy-chair. He named the dog "Waif," because, until Gervas took him in, he was a wanderer and did not belong to any one.

Waif was so well treated that he grew fat. His coat became glossy and his eyes lost the hurt look which they used to have. Wherever one saw Bingham's lame boy, close behind would always follow the "Waif."

And so a year passed, and it was winter again and a deep snow lay on the ground. All day Gervas had been watching the boys throwing snow-balls and making snow-men, so Gervas that night went to bed very tired indeed. He was soon fast asleep, as was

his father's bedroom door. "Fire! Fire! Fire!"

Although but half awake, the man quickly saw their peril. Seizing his child in his arms, the father wrapped a blanket about him and rushed into the hall. It was filled to suffocation with smoke. The roar of the flames increased, and the stairs were now on fire!

Putting the child down against the wall in the little hallway, he said, his voice stern with the horror which clutched at his heart-strings, "Do not move till I come for you! I am going for the ladder at the attic trap-door."

In a moment he was gone. Gervas looked about him as best he could in the blinding smoke and the red glow of the fire.

Then a great fear came into the little cripple's heart. Fear, but not for his own safety. Where was Waif? "Waif!" he called piteously, "Waif! Waif! where are you?" But no cold nose was thrust into the little cripple's hand. There was no answering bark.

Then, not having his crutch with him and knowing that there was no time to lose, he fell upon his hands and knees and crawled back into his room. There, under the bed, trembling and panic-stricken, was the forgotten Waif. In the excitement of leaving the room his father had shut the dog inside.

When Mr. Bingham returned with the ladder he found his boy gone. The smoke was blinding, the roar of the flames increasing.

With a cry like an animal wounded to the death, the stricken man dashed frantically through the stifling smoke, calling, "Boy! Boy!" He burst into the child's bedroom and found Gervas groping blindly about in the blackness, trying to find the door. He held "the Waif" tightly under his arm.

Snatching another blanket from the bed, he seized both boy and dog in his arms and wrapped it around them and carried them to the window at the end of the hallway and lowered the ladder. Down this he safely climbed with his burden to the ground.

By this time the neighbors were around and a small crowd had collected to watch the fire from the porch of the freight depot. Among the group was the stranger whom Waif had followed to Bingham's store the year before. "A narrow escape," he said to Mr. Bingham, as the store roof crashed in. "Who gave you the timely warning?"

Before his father could answer, Gervas, still wrapped in his blanket, replied: "My friend, 'the Waif.'"

A Query

WHEN I don't want to go to bed
 My mama pats me on the head
 And says I am too little yet
 To sit up when the lights are lit.

But when I hurt myself, you see,
 She always takes me on her knee
 And hugs me up and says, "Oh, fie,
 My man is much too big to cry."

And so you see it puzzles me
 To know the reason why
 I'm still too small to sit up late
 But much too big to cry.

ELIZABETH CLARKE HARDY.



"Fire!" he cried aloud, as he limped across the room

also Waif in his chair by the bedside. He had not been asleep long when he was aroused by the frightened barking of the dog. He turned stupidly in bed: "Down, Waif!" he called. "Get down."

But the dog only leaped about on his little master's bed, whining and barking and pulling at his sleeve.

Finally Gervas opened his eyes and sat up. The room was full of smoke! In the next room, through its closed door, he could hear his father's deep, regular breathing.

Leaping from his bed, he listened.

What was that crackling, roaring sound?

Frantically the dog leaped from side to side, pulling at the boy's night-clothes.

"Fire," whispered Gervas with dry lips.

"Fire!" he cried aloud, as he limped across the room and beat with his crutch on

The Letter-Box

DEAR COUSIN SALLY:—I will tell you how I came to own a swarm of bees. One bright sunny day I was working in my flower-garden, when, to my surprise, I saw a swarm of bees in an apple-tree. I ran into the house and told my folks, and they said if I could get the bees into a hive, I could have them. So I fixed a bee-veil for myself out of an old straw hat and some mosquito-netting. Then I got a big bucket and shook the bees into it. They were not very tame, you may be sure. I took them to the hive and put them into it. They are now making honey. I have only been stung once by them. I had a sweet-potato patch last summer and got twenty-six dollars out of it. I like the farm. It is the place for everybody. Don't you think so? You can go fishing and bathing and have all the fruit you want to eat. Your friend, FRANK AMRHEIN, Greenwood, Delaware.

DEAR COUSIN SALLY:—You cannot imagine how glad I am to be a member of our club. I am ashamed that I have not answered before, but I have just returned from a visit in Canada. We live on a homestead in the most beautiful valley you ever saw, and right on the Birch Creek. We carry the water that we use from this creek. There are lots of trout in it. We are only two miles from the Rockies. I have the dearest little pony. PEARL WADDELL, Age Eleven, Dupuyer, Montana.

DEAR COUSIN SALLY:—I have not written to you for such a long time you will think that I have forgotten you. But I have not.

In my garden I have some pansies, morning-glories, sunflowers and quite a few other flowers. I have a little sister who is very eager to join our club. She cannot write yet, so may I do it for her?

I am afraid that I am not doing what you said I must in your letter, but I am trying my best.

My smallest brother has a cat and two kittens. My little sister and I each claim one for our own. Mine is black and white. I call it "Beauty." The other we call "Little Puss," because it is like its mother, and we call her "Puss." I must close now, wishing the club every success.

Your loving cousin,
 ISABELLE CANTHER, Age Nine,
 Wabamum P. O., Alberta, Canada.

DEAR COUSIN SALLY:—Do you know you have a new cousin? My! what a nice lot of cousins we have. I wish I could see them all—we would surely have nice times together. I am thirteen years of age with dark brown hair and brown eyes. I have four pet cats, and a little garden in which I have planted some flowers and vegetables. I love to read the Young Folks' Department and wish you would tell us some more about your big, busy city. I am inclosing five cents for your lovely club button.

Lovingly,
 ALICE P. CARSON,
 Equimunk, Pennsylvania.

Winners in June 10th Contest

HAZEL HUBBELL, age sixteen, Hemlock, Michigan; Frank Hout, age thirteen, Middlebury, Indiana; Leta B. Major, age thirteen, Bellevue, Tennessee; Cecil Burns, age fifteen, Red Wing, Minnesota; Edna Berkey, age nine, Montrose, Colorado; B. Bernice Bennison, age seventeen, Lenox, Iowa.

The following cousins deserve honorable mention: Clara Stackmann, age fifteen; Mamie Youde, age seventeen; Lionel R. Blodgett, age fifteen; May Brown, age sixteen; Lulu Slaver, age sixteen; Pearl Mosley, age thirteen; Myra D. Laughlin, age twelve; Jessie Julian, age fourteen.

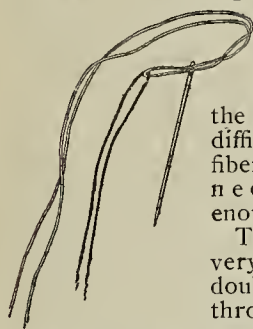
Monthly Prize Contest

TO THE six boys and girls sending in the best verses on "School Once More" or "My Teacher" we will give prizes of water-color paints, books and post-card albums. Do not write more than four stanzas. Write name, age and address at the top of your paper. The contest closes August 31st and is open to all boy and girl readers who are seventeen years of age and under. Address Cousin Sally, care of FARM AND FIRESIDE, 11 East 24th Street, New York City. All boys and girls under seventeen wishing to join Cousin Sally's Club may obtain a button of membership by inclosing five cents. Address Cousin Sally's Club, care FARM AND FIRESIDE, 11 East 24th Street, New York City.

The Housewife's Club

EDITOR'S NOTE—Most every woman has originated some sort of a device or convenience to make part of her housework easier and less burdensome, and to all who have, we would ask that you write and tell us about it. Aside from making a little pin-money for yourself, you will be helping others, and this is what "The Housewife's Club" is for. We will give \$2.00 for the best description and rough sketch of an original home-made household convenience or labor-saving device, and \$1.00 for the next best, or any that can be used. We will also give 25 cents each for good kitchen hints and suggestions, also good tested recipes that can be used. All copy must be in by the tenth of September. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contribution will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

When Darning Woolen Goods



How to thread a needle with thread from woolen materials

Woolen materials should be darned with a thread from the goods, but it is often difficult to get the barbed fiber to enter the eye of a needle that is small enough to do fine work.

Take a short piece of very fine cotton thread; double it and pass it through the eye of the needle. Now slip an end of the woolen thread through the loop thus made. Draw the cotton back gently, but firmly, and the woolen thread will follow. If the cloth is a mixture, be careful to darn with a mixture of threads, but use stronger for the warp, filling in with frailer ravelings. A bias piece of cloth will furnish the necessary length of thread.

Miss A. G., Minnesota.

Flour-Starch

Take the required amount of flour (I use about four large tablespoonfuls), put in a pan or stew-kettle and add cold water to make a thick batter. Beat it until perfectly smooth and free from lumps, then thin with cold water until it is as thick as cream. Shave a little soap very thinly into it and pour on boiling water until the starch is clear looking and thick. Remove from fire and add a tablespoonful of kerosene and it is ready for use. I always use this for my colored clothes and never have any trouble with starch showing or irons sticking. All garments should be turned wrong side out before being dipped into starch.

Mrs. I. M., Colorado.

Parker-House Rolls

Scald one pint of milk, add to it one heaping tablespoonful of butter and an even teaspoonful of salt. Let stand until lukewarm. Sift one quart of flour into a large earthen bowl, mix it with a tablespoonful of granulated sugar and one cake of compressed yeast dissolved in a little water. Stir the warm milk and flour together, adding more flour as required to make a stiff dough. Cover tightly and let stand in a warm (not hot) room overnight. In the morning knead the dough thoroughly then make into small turn-over rolls and let stand in a warm place until very light. Then bake in a quick oven for fifteen minutes. This recipe makes excellent rolls. If desired, they may be made in the morning to serve at supper.

Mrs. W. A. C., Virginia.

Tomato-Vinegar

The surplus tomatoes may be used for making vinegar. Press the juice from ripe tomatoes into a clean jar or jug. To each quart of juice add one tablespoonful of brown sugar. Keep in a warm place and it will soon turn into excellent vinegar.

C. R., Nebraska.

Tomato-Catchup

Wash ripe tomatoes, cut in pieces and boil until soft enough to rub through a sieve, to remove seeds and skins. Boil down one half and measure. To each quart of pulp add a half-pint of cider-vinegar, one level teaspoonful each of salt and ground cloves (a teaspoonful of cayenne pepper may or may not be used, just as preferred), one level tablespoonful of black pepper and one or two tablespoonfuls of cinnamon. Bottle while hot and cork tightly. We pour a little olive-oil in before inserting the corks, as the oil excludes air. Fruit-juices may be preserved in the same way.

Miss E. B., Nebraska.

Utilizing Left-Over Pie-Crust

When small pieces of pie-crust are left from making pies, instead of forming them into tarts as is usually done, secure some round hard-wood sticks about four inches long and, after the pieces of crust are rolled out thin, cut them into narrow strips with a jagged iron. Flour the sticks and roll the strips around them, letting one edge drop over the other. Place these on a tin and put in a hot oven to bake. When the crust is partly cool, slide the stick out. When serving, fill the spaces with whipped cream, jelly or marmalade, and the family will be delighted with a new dish.

Miss L. P., Ohio.

Cream Cheese

Take fresh buttermilk, put it on the stove until curd and whey separate (until curd settles). Do not let it get too hot, as it will spoil the taste of the cheese. Pour into a thin sack to drain. When well drained, remove from sack and mash fine. Season with salt, also pepper, if desired, and thin it with sweet milk.

Miss M. F. G. K., Kansas.

Helps About the Home

When the wire sieve of the milk-strainer becomes filled up and does not allow the milk to pass through freely, it can be made as serviceable as new if thoroughly rubbed with table-salt.

N. D. H., Michigan.

To keep lard fresh for several months, stir in about a tablespoonful of honey to six or eight gallons of lard after removing cracklings.

Mrs. E. D., Ohio.

Tan-leather boots can be nicely cleaned with turpentine. Pour a few drops on a woolen cloth and rub.

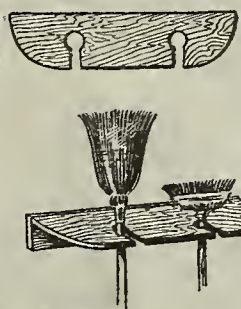
Boiling fruit may be poured into a glass vessel without danger of breakage, provided the glass is set on a folded cloth which has been dipped in cold water.

F. D., Delaware.

For burns use borax or soda moistened with water and bound on the parts.

Mrs. J. S., Illinois.

Broom-and-Mop Holder



A convenient rack for brooms and mops

Here is a device that I find exceedingly useful. It is so easy to make that there is no reason why every housewife cannot have one for herself. Take a three-fourth-inch board, fourteen inches long by four inches wide, and three inches in from each end, at both sides bore a hole one and three fourths inches wide. Then saw out the piece until it is just large enough for the handle of your broom to slip through. The broom and mop should be put in upside down. Fasten a cleat on under side and nail to the wall. I would not be without this holder and I feel sure other housewives will find it of great help to them.

Mrs. A. D. S., Canada.

Some Cooking Hints

To have beefsteak juicy and tender, roll it in flour before putting it in a hot spider to fry. The flour seems to hold in all the juice and makes the steak perfect. When done salt and pepper.

Mrs. M. A., Washington.

If your flour is a little dark and will not rise in biscuits, add nearly as much baking-powder as you do soda and the biscuits will be lighter and better.

Miss N. C., Virginia.

A little salt thrown into the water in which eggs are poached will prevent the whites from spreading.

Mrs. E. W. P., Iowa.

Salt sprinkled in the oven will prevent cakes sticking to the pans.

Miss E. H., Texas.

To tell when a custard-pie is done, dip a teaspoon in cold water, then carefully insert in the center of the pie. If the pie is done, not a particle of custard will stick to the spoon.

J. H. C., Connecticut.

To Pickle Beef or Pork

For one hundred or one hundred and twenty pounds of beef or pork: One gallon of salt, five pounds of brown sugar, two ounces of cayenne pepper, two ounces of black pepper. Mix all of the ingredients together.

While the meat is still warm, cut into small irregular pieces, taking out all of the bone. Roll each piece in the mixture, pack closely in a jar. When full, cover the top with what is left of the salt mixture and weight down. Sink jar in ground within two or three inches of the top. Tie up tight and it will be ready for use in three weeks.

We used the last of our beef in April and it was put up in October.

Mrs. M. B., Arkansas.

A Hot-Weather Help

During the hot weather a kerosene-lamp may be used many times to save a fire in the stove. Over the table suspend a small chain from a staple in the ceiling. Take a stout piece of wire and bend it to form a hook at each end. On one hook hang a small kettle, and hook the other in the chain so that the kettle will hang about an inch above the lamp. Tea or coffee may be made in a few minutes over an ordinary lamp, and you will find it convenient for warming the baby's milk. Care should be taken not to allow anything to boil over on the lamp. I have used this device a long time and find it invaluable during the summer months, especially when one has occasion to warm something during the night.

M. B., Virginia.



Good use for kerosene-lamp in hot weather

To Can Sweet Corn

To eight pints of corn cut from cob allow one half pint of salt, one half pint of sugar and one pint of water. Boil twenty minutes and can in glass jars. Have both jar and lid hot.

When opening the corn for use, soak it two or three hours in cold water, as it is very salty.

I have used this method several years with excellent success. I have never lost a jar.

Mrs. D. I. S., Pennsylvania.

Good Silver and Brass Polish

To four pounds of the best quality whitening add one fourth pound of cream of tartar and three ounces of calcined magnesia. Mix thoroughly. This is a fine powder for polishing gold, silver, brass, copper or glass where a brilliant luster is desired. Use the polish dry, rubbing it on with a piece of chamois, which has previously been moistened with water, and polish with a dry cloth.

Mrs. W. D. B., Indiana.

Jelly-Making

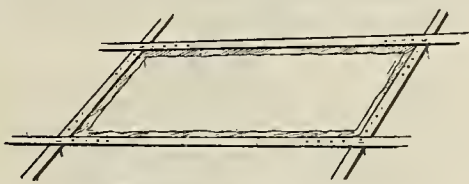
Iwonder if any of the housewives would like to try my way of making jelly. First, see that your fruit is well boiled, with not too much water in it; then strain clear. Put on the fire in a shallow granite pan (large size), only two (tin) cupfuls at a time, boil from five to fifteen minutes, according to the thickness of your juice and its acidity, then put in an equal quantity of granulated sugar and stir constantly until dissolved. Just as soon as you see it begin to simmer around the edge of the pan take it off and fill your glasses. Never boil your sugar.

Try this plan and see if your jelly is not firm and tender. I can make more jelly from the same amount of fruit than most any one I know of. The secret is to have your juice right before putting in the sugar.

Miss M. C., North Carolina.

Adjustable Curtain-Stretcher

White lace curtains, when washed, must be dried in the open air and sunshine if one wants them to look their best. Of course, it is not every housewife that can own a curtain-stretcher, but here is a device which will answer the purpose just as well. It costs practically nothing and is so simple that any one can make it. Take four strips of wood about one inch thick and four inches wide and long enough for your largest curtains. Bore several small holes in each piece as indicated so they can be adjusted to any size. Put a nail through to hold pieces together.



A home-made curtain-stretcher

Tack a narrow strip of muslin along each piece and lay the frame on the backs of four chairs. Put the first curtain on by pinning to the muslin strip at each point. All the others of the same size may be put on by simply hooking the points over the pins used in the first curtain. The same frames can also be used for quilting or knotting comforts.

Mrs. C. W. B., Virginia.

Tub-proof Fadeless Brown
You have always wanted brown cotton dress-goods that would wash without fading

Simpson-Eddystone
Fast Hazel Brown Prints are fast to soap, light and perspiration—the fastest and most beautiful shade of brown. The cloth is well-woven and durable; the designs are new and artistic. These calicoes are the result of over 65 years' experience.

Show this advertisement to your dealer when you order, and don't accept substitutes. If not in your dealer's stock write us his name and address. We'll help him supply you.

The Eddystone Mfg. Co., Philadelphia
Established by Wm. Simpson, Sr.

In What Month Were You Born?

Would you like to have your birthstone and the appropriate flower of the month in which you were born on a post-card? You can get them without one cent of expense.

These twelve beautiful post-cards, one for every month, have pictured on each one the stone or jewel that should be worn by persons born in that month. The post-card also tells what the jewel signifies. For instance—the January post-card shows a beautiful Garnet in a brooch. It tells that it signifies constancy. Each post-card also shows a special flower for each month, and its meaning. The January post-card also has a bunch of beautiful Purple and Gold Pansies—meaning "thoughts of you." There are twelve post-cards in all, one for each month. All twelve without cost.

Send To-day For Them

We will send you these beautiful post-cards without cost, if you will send us 10c (silver or stamps) for three months' subscription to Farm and Fireside. Our only requirement is that the subscription must be for some one who is not now a regular subscriber. Make sure to get these birthstone post-cards and write to-day. Address

FARM AND FIRESIDE
Springfield, Ohio

AGENTS WANTED Men or Women to sell Consumers. Big Profits. Groceries, Coffees, Teas, Extracts, Perfumes, Soaps, etc. With or without premiums. Write for catalogue A.
Bushway Flavoring Extract Co., 951 N. Water St., Decatur, Ill.

DAISY FLY KILLER

placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20 cents.
HAROLD SOMERS
150 DeKalb Ave.
Brooklyn, N. Y.

ABANDONED IT

For the Old Fashioned Coffee Was Killing.

"I always drank coffee with the rest of the family, for it seemed as if there was nothing for breakfast if we did not have it on the table.

"I had been troubled for some time with my heart, which did not feel right. This trouble grew worse steadily.

"Some times it would beat fast and at other times very slowly, so that I would hardly be able to do work for an hour or two after breakfast, and if I walked up a hill it gave me a severe pain.

"I had no idea of what the trouble was until a friend suggested that perhaps it might be caused by coffee drinking. I tried leaving off the coffee and began drinking Postum. The change came quickly. I am now glad to say that I am entirely well of the heart trouble and attribute the cure to leaving off coffee and the use of Postum.

"A number of my friends have abandoned coffee and have taken up with Postum, which they are using steadily. There are some people that make Postum very weak and tasteless, but if it is boiled long enough, according to directions, it is a very delicious beverage. We have never used any of the old-fashioned coffee since Postum was first started in our house."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.



Hello Daddy—

Please don't forget to bring home some

Post Toasties

and I'll have a good hug and kiss for you.

Postum Cereal Co., Ltd., Battle Creek, Mich.

Get a Watch and Fob Without Cost

Boys: Here is your chance to obtain a handsome and useful watch, and a fine leather fob with a gilt metal charm engraved with your own initial letter without cost. FARM AND FIRESIDE guarantees you satisfaction.

DESCRIPTION: This watch has a handsome nickel case, with open face. It is a stem-wind and a stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only $\frac{3}{8}$ inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which any one would be proud.

The Fob is of handsome black leather with a polished buckle, like illustration, with a rich gilt charm engraved with your own initial.



MOVEMENT: Regular 16-size. Lantern pinion (smallest made). American lever escapement, polished spring Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by FARM AND FIRESIDE.

The manufacturers will make all repairs for a year free, as explained on the guarantee.

How to Get the Watch

We will send you this elegant watch and fob, without cost, if you get eight friends each to take FARM AND FIRESIDE for 8 months at the special price of 25 cents.

Just send us your name and address on a post-card or letter, to-day, and say that you want the watch. We will send you by return mail, without any cost to you, a book of 8 coupons, each one of which is good for a special eight-month subscription to FARM AND FIRESIDE. We will also send you a sample of FARM AND FIRESIDE. This outfit will help you a great deal in getting subscriptions

quickly. You sell the coupons to your relatives and friends at 25 cents each, send the eight names and \$2.00 to us and we will send you this grand watch by return mail. That is all you have to do, it is easy to sell coupons. Thousands of boys have done it, you can do it in half a day if you try.

Write to us at once.

FARM AND FIRESIDE, Springfield, Ohio

The Woman Farmer

By Cora Wilson Stewart

WITH the Kentucky mountaineers farming is the principal occupation, and yet here is where the poorest farming in the world is done, where the soil is worst abused and worn out and wasted, and where there is the greatest waste of time and energy, lands and timber of any section in the world. But those who have declared the farmers of the Kentucky hills a shiftless set could have made one exception, at least. Good farming in this section would be noteworthy in a man for the sake of contrast, if for nothing else, but when the innovation is made by a woman in a land of steep and rugged hills where strong men have hardly succeeded in wresting the means of subsistence from the soil, her success is indeed worth chronicling.

Polly Carter was not aware of the latent business ability and agricultural sense which she possessed as long as she had Abe to depend upon; but when, during the bloody Rowan County feud, a bullet fired from ambush cut her husband down in the furrow behind the plow, Polly could not see the children starve, so she followed the example of brave Molly Pitcher,

farmer looked as though one of Mrs. Russell Sage's "community men" had had it in charge.

Besides the income from her own farm, Polly dug dollars out of the neighbors' uncleared forests; for whoever heard of a mountaineer refusing to allow a neighbor to hunt or pick berries or dig ginseng on his farm? And Polly had the ginseng of the country cornered before her stupid neighbors realized that money really "grew on bushes" in their wilds.

The way Polly hit the markets was the most marvelous thing of all to her neighbors. When Polly raised potatoes, they were always scarce and the price was high; when tobacco sells at a good price, Polly is always on hand with a plentiful share for sale; and when last season she turned her attention to broom-corn, the neighbors thought she had surely missed it, at last; but when brooms jumped in price from twenty and twenty-five cents to forty and fifty, and Polly began to dispose of her stock to a broom department of an industrial school near by at a good price, the mountaineers were astounded and wondered whether the



Polly Carter and Her Plow-Horse

only she followed the plow, a more difficult and wearing task than loading the cannon.

Then Polly began to show the neighbors some practical farming. Without male assistance, she plowed, planted, hoed and reaped on her little sixty-acre hillside farm. Implements found their way to her farm, of which the farmers in the country around did not know the name, much less the use. While the male farmers planted the same crop on the same hillside year after year, the woman farmer alternated her crops, growing first tobacco, then rye, then turning her hillside into clover; while others considered one portion of the farm as good for an orchard as another, Polly turned her steep north hillside into a thriving peach-orchard. While others wore one spot of ground out in a few years and then cleared another, Polly sent boxes of her soil to the Agricultural Experiment Station at Lexington for analyzing and advice as to the element necessary to make it productive, and when advice was given, it was carefully followed and soon the little hillside farm of the woman

woman was a witch or whether she was in touch with Wall Street financiers.

Strange to say, The Woman Farmer of Feud-Land has aroused no spirit of jealousy among the hill-folk, and they show no resentment toward her for surpassing them, but they take great pride in pointing out to strangers her cozy home and modern barn and well-cultivated acres. "Polly's a good un," is their version, and they would often aid her if she would accept their proffered assistance, but she says, "It makes me nervous to see men farm," and prefers to do it herself.

The woman's example is having a slow but sure influence in this country of neglected farming. While the older people may not change their methods, the younger ones are staunch admirers of the woman's methods, and will doubtless transform the country and leave it to the next generation in a more productive and beautiful state than they have found it, and The Woman Farmer of Feud-Land will doubtless be one whom God will reward as one of the real missionaries among a noble but unawakened people.

The Kind I Like

By M. G. Rambo

I LIKE the bird that sings its song
In the top of the cherry-tree;
But the crow that caw-caws all day long,
It has no charm for me.

I like the field where the flowers grow
And all the air perfume;
But the soggy marsh with its vapors dank,
It fills my heart with gloom.

I like the girl with sparkling eyes
And a face with smiles alight;
But the fretful one with a sourish scowl,
I want her out of sight.

I like the boy with a jolly heart,
Whose laugh has a merry ring;
But the grumbling chap with an all-day
grouch,
Of him I cannot sing.

God forgives our sins and then forgets them if we can forget them ourselves.

Faithful Memory of a Cow

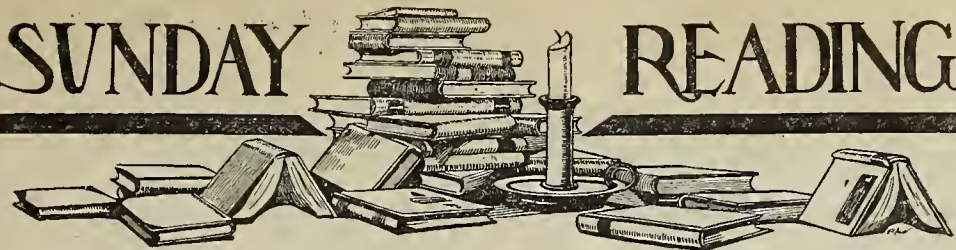
A FARMER in the town of Perdeal, in Servia, had his best cow stolen from him in May, 1909. No trace of the cow nor of the thief could be found.

Last February a cattle-train from Hungary was passing through the depot at Perdeal, when several peasants, the owner of the cow amongst them, recognized the animal that had been stolen three quarters of a year before in one of the cars. The former owner protested, but the cow was transported to its destination with the rest of the cattle.

A complaint of his, however, led to the following decision of the Solomon judge. The cow was to be brought back to Perdeal and let loose. If she returned to her former stable on her own account, she should remain with the plaintiff. After ten months' absence, the cow, without hesitation, after being set free, took the way to her old abode to the greatest joy and pride of her rightful master.

God also hears that part of our prayer that we are unable to express.

SUNDAY READING



The Life of Trust

By John E. Bradley, LL.D., Ex-President of Illinois College

THERE is no subject connected with religion upon which thought is more frequently confused than concerning faith. Because of such misconceptions many people have doubts and difficulties in regard to it.

Faith is reasonable. It is not credulity, believing without evidence. It does not overlook facts, nor fail to reason from them. It simply carries one into the realm of the future and the unseen, the same principles and methods which science applies in material investigations. Like science, it insists that any given effect can only be produced by an adequate cause. It is a far-reaching principle of action, constantly shaping our daily life.

Faith makes nations great. It was faith in the Roman eagles which made the legions victorious. It was faith in God and Mahommed, his prophet, which inspired the dreaded Saracen hosts. It was a still more lofty faith which rendered Cromwell's Ironsides invincible. It was faith which guided the Pilgrims across the seas, sustained them through many years of trouble and danger and inspired them to organize the best system of civil government the world has ever known.

Faith makes men successful. It was faith in an idea which enabled James Watt to triumph over incredible difficulties and which led Alexander Graham Bell to persevere in spite of poverty and ridicule, till they gave the world the two inventions which have so changed and enriched modern life. The vast transactions of the New York Clearing House would cease were it not for faith. Our commerce, indeed our civilization, would languish and die if men did not have faith in one another.

Why is it so difficult to realize in our personal experience this sweet virtue which is so easily exercised in other relations? If we can trust our fellow-men, why can we not trust our heavenly Father? How gently, how persuasively, the Master bids us do this. He points to the lilies and asks what hand can fashion more beautiful raiment. He points to the birds, flitting, care-free, from bough to bough and tells us that food is provided for them and then reminds us that the wisdom and resources which are sufficient for the manifold needs of the inanimate world will not fail to provide for God's own children.

Faith is manifested under two contrasted forms. There is the faith which, believing in the infinite wisdom and infinite love of God, accepts sorrow and misfortune as his divine appointment to be borne in a spirit of peaceful resignation.

And there is also the faith which inspires hope—faith which achieves. It was this faith which guided Columbus across unknown seas and gave him strength to persevere in his westward voyage in spite of portends and a mutinous crew. It was this courage-giving faith which enabled Washington to endure the terrible winter at Valley Forge and which sustained and cheered Lincoln through the depressing struggles and discouragements of the Civil War. And it is this hopeful spirit of faith in man and faith in the God of Nations which has recently inspired Ex-President Roosevelt to urge upon the courts of Europe the establishment of permanent and righteous peace.

The power of an overcoming faith is needed in the experiences of every-day life no less than in its great emergencies. Individual strength is limited. Imagination conjures up dangers. Uncertainties lie on every side. It is easy to apprehend trouble. We often forget that God is our all. Henry Ward Beecher once said that the worst troubles of his life had never come to pass. Nothing so depresses the spirits, unnerves courage and weakens the hands as worry. It broods over the disappointments and trials of the past, making of them a background on which it paints the phantom dangers of the future. It consumes time needed for present duties. It magnifies trifles into insurmountable obstacles. How few people are wholly free from these absorbing anxieties? How many fall under their crushing load?

It is related of Mungo Park, the African traveler, that, at one time, lost in a desert and overcome by heat and exhaustion, he was about to yield to despair, when a tiny plant caught his eye, revealing wondrous beauty and perfection. As he gazed at the flower and reasoned that if God so cared for the little plant he would not forget him, his faith and courage revived and he renewed his journey to safety.

He who does his best and then trusts Providence is like the farmer who sows his seed assured that the harvest will come in due time. Be not anxious. He who once spoke peace to the storm-lashed waters speaks peace to-day to hearts that trust him. Do your part. Accept necessary care and responsibility. Give reasonable foresight. Discharge present duty. Then trust—knowing that outside the barriers which limit your own strength lie forces which never fail and are directed in infinite wisdom and love by your always faithful Heavenly Father.

What a Friend We Have in Jesus

By Frank J. Metcalf

THE real authorship of this popular hymn was questioned for a number of years after it had come into common use. In some of the Hymnals it is set as anonymous and in the Gospel Hymns it is placed over the name of Rev. Horatius Bonar. When he had denied its authorship, "unknown" was written after it. And it was not until the death of Joseph Scriven that he was identified as the writer of this well-known and beautiful composition. A friend had come in to sit with him in his last sickness, and among the manuscripts in the room was this poem. Then it was that the dying man acknowledged that the stanzas were the product of his pen. He had written them in 1855, had sent one copy to his mother in Ireland and another to an aged friend in Canada.

Joseph Scriven was born in 1820 near Dublin, Ireland, and came to this country when about twenty-five years old. He was a member of the Plymouth Brethren, a small religious sect that had arisen in Plymouth and Dublin about 1830. But in Canada he had no ecclesiastical relation, though he often exercised his gifts as a lay preacher during the twenty years of his residence in Port Ontario in Canada. He died October 10, 1886. His "Hymns and Other Verses" were published in Peterborough in 1869, and contained ninety-four "hymns" and twenty-one "other verses." Many of them are crude and imperfect, and no other one has won the love of the people like this hymn. In fact, the name of Joseph Scriven will

be preserved chiefly as the writer of it. It is given here in full:

What a friend we have in Jesus,
All our sins and griefs to bear;
What a privilege to carry
Everything to God in prayer.
Oh, what peace we often forfeit,
Oh, what needless pain we bear—
All because we do not carry
Everything to God in prayer.

Have we trials and temptations?
Is there trouble anywhere?
We should never be discouraged,
Take it to the Lord in prayer.
Can we find a friend so faithful,
Who will all our sorrows share?
Jesus knows our every weakness,
Take it to the Lord in prayer.

Are we weak and heavy laden,
Cumbered with a load of care?
Precious Savior, still our refuge—
Take it to the Lord in prayer.
Do thy friends despise, forsake thee?
Take it to the Lord in prayer:
In His arms He'll take and shield thee,
Thou wilt find a solace there.

The music was composed by Charles C. Converse, who has written many other pieces of music and edited two hymnals used in the Presbyterian Church. He was also one of the editors of the Standard Dictionary.

The blessings that we enjoy the most are those that we feel we deserve the most. The thrust that we do not deserve does not hurt us.

How to Buy Soda Crackers in the Country

Next time you go to the store buy enough Uneeda Biscuit to last till next market day. "But," you say, "will they keep that long?"

Yes—

Uneeda Biscuit

are the soda crackers that come to you protected in sealed packages, so that you *always* have fresh soda crackers no matter how many you buy or how long you keep them.

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Boys, this rifle shoots accurately. Look out, crows and hawks, if a boy ever gets after you with this King Air-Rifle. It cultivates trueness of sight and evenness of nerve.

It uses no powder—makes no noise—uses air and shot. You will have use for it every minute.

Expert workmanship has made this a wonderful gun. This rifle is provided with pistol-grip, true sights, and is so strongly made it is almost impossible to get out of order. It is extremely simple in construction.

Any child can use it and become an expert shot. It makes boys grow to be manly, self-reliant men. Every boy should learn to handle a rifle. It makes them healthy and strong—sends them out of doors.

Any boy would be happy to get this rifle. No wonder every boy should want one, we are glad to help every boy get one—without having to pay a cent for it.

How to Get It

You can get this wonderful rifle without spending a penny if you will do a little work for it. Send in the coupon to-day to the Rifle Man or just write a post-card—say you want to earn a rifle. We will be glad to help you.

Write To-day

The Rifle Man

FARM AND FIRESIDE, Springfield, Ohio.

Please tell me how I can get the famous King Air-Rifle without having to pay a cent for it.

Name

Address



The Housewife's Letter-Box

We shall be glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. We want this department to prove helpful to our readers, and from the letters we have received we feel sure that our aims have been realized. While there is no payment made for contributions to these columns, still our readers may feel that their help and assistance is doing a great deal for others. All inquiries and answers should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

Questions Asked

Will some one please tell me—

How to bake ice-cream cones?
Mrs. I. J. F., Pennsylvania.

How to clean comforts without untying them?
D. A. W., Ohio.

How to extract the essence or oil from peppermint and bergamot? A SUBSCRIBER.

How to bake beans? How to make quince honey?
Mrs. A., Ohio.

How to put up white grapes so that they will taste like the fresh ones?
Mrs. J. A. M., Texas.

How to can English peas and snap beans?
Miss N. E. M., Tennessee.

Will E. N., of Oregon, who contributed pattern of box quilt in May 10th issue, send me her full name and address? One of our readers wants a little help from her.

EDITOR.

If Mrs. R. H. G., of Wilmington, Ohio, will tell me in what number the recipe for cheese appeared, I shall take pleasure in sending it to her.

EDITOR.

Questions Answered

Grafting-Wax, for Mrs. E. W., Connecticut

Melt together rosin, four parts by weight; beeswax, two parts, and tallow, one part. Pour into a pail of cold water and grease the hands slightly; then pull the wax until it is about the color of molasses-candy. Make into balls, wrap in muslin and store for use.
A. G. H., West Virginia.

E. S., of Kansas, writes that a good grafting-wax can be made of equal parts of beeswax, tallow and linseed-oil.

For Mrs. E. M. F., Ohio

If you will tell me when the plan for an ice-box was published, I will be glad to send it to you. I have searched through our 1909 and 1910 volumes, but without success. When you write, will you please send me your name and address so that I can communicate with you direct.

EDITOR.

Canning Meats, for Mrs. E. J. C., of Ontario

Failing to see an answer to the query in the Housewife's Club relating to canning meats and soup stock, I submit the following:

Here in Florida the weather is so warm that we cannot cure meat with the bones left in, so I resorted to the following method which proved successful:

Take backbones, ham and shoulder bones, ribs, etc., and boil until meat slips from bones; pack meat in glass fruit-jars, filling crevices with the broth (which should be boiled slow enough to form jelly when cold); put on rubbers and lids, place in a vessel and pour in water until it nearly reaches lids, cover the vessel and boil until contents of jar are boiling, remove from fire, tighten lids and leave until cold.

If top of lid is concave when contents of jar are cold, it is ready for storage.

For preserving the broth, small bottles are best, because when a little is required for

soup or gravy, a pint or a quart will sour before it can be used.

While the broth is warm, strain it, fill bottles, place them in a vessel and nearly cover with water, boil until contents of bottles are boiling or beading well. Remove from hot water one at a time and cork (soften corks in hot water before using). Have sealing-wax boiling hot in a small vessel and dip the mouth of bottle in till a smooth coating of sealing-wax covers stopper and mouth of bottle. Have all corks cut off even with mouth of bottle.

Another good way is to melt beeswax, saturate small pieces of muslin and press tightly over corks and mouths of bottles.

Fruit-juices may be preserved in the above manner.

Strips of muslin dipped in melted beeswax and bound tightly around jelly-glass lids will exclude mold and insects.

When canning fruit and vegetables, often there are not enough jars to fit tightly in the vessel in which they are boiled. This causes trouble by allowing jars to turn down while boiling. The trouble is easily overcome by placing empty cans (tin tomato-cans are good) in the vacant places. They soon fill with water and keep the jars of fruit from falling over. Mrs. J. M. L., Florida.

For Mrs. M. W. T., Michigan

I am sure the following process will remove the grape-stains from your little girl's dress:

Soak the dress in sour milk or buttermilk, then lay it in the sun. Afterward wash with soap and water. If one trial does not prove efficacious, repeat. I took out peach-stains in this way, after the garment had been washed.
Mrs. C. C. C., Nebraska.

Rhubarb-Wine, for Mrs. J. V. S., Virginia

Clean and cut in pieces, cook until just soft, use a little water in granite pot to keep from burning. Strain through jelly-bag, add as much water as you have juice. To each gallon of liquid add three and one half pounds of sugar. Fill your keg or barrel and be sure to leave the bung open and up so it will work off. As it lowers add a little sweetened water to keep it full. I keep a bottle full to have it handy. When done working, cork. Keep in a cool, dry place. It will keep for years. This is a genuine wine when made right—and is a splendid tonic.
W. R., Canada.

For Mrs. H. G., Indiana

Suggestions for ridding a house of fleas were given in the July 10th issue.

Sweet Pickles, for Mrs. A., Ohio

Wash as many little cucumbers as you want to pickle. To remove the particles of grit which may cling to them, rub each one with a flannel cloth until quite smooth. Do it gently so as not to break them. When all have passed through this process, put them in a brine for twenty-four hours, then drain off and rinse in clear water. Prepare, as follows, a sufficient quantity of syrup to cover the pickles: To every quart of vinegar add three pounds of sugar, half a teaspoonful each of cloves, allspice and mace, and one teaspoonful of cinnamon (use ground spices). Heat the vinegar and sugar, boil and skim, add the spices tied in tiny bags (one for each can), put in the pickles to scald for a few minutes, then put in glass jars, fill with the syrup and screw on tops tight.

To Can Peas, for Mrs. A., Ohio

There was a recipe for canning peas in the June 25th issue, also one for canning corn.

For F. D., of Washington

Here are some suggestions which may help you. I have tried this plan on ingrain carpet that was worn thin, and it worked splendidly:

Select burlap of as close a weave as possible. Clean the floor thoroughly and cover with several thicknesses of newspaper. Then tack the burlap down tight.

Make a paste by taking flour and mixing with a little cold water to get out the lumps, and then add boiling water, stirring all the while to prevent further lumping until a thick paste is made. Remove from fire and let cool. When nearly cold put a thick coat on the burlap and let it dry. If this does not make the burlap smooth, apply another coat. When this has thoroughly dried, it is ready to paint. Paint the burlap any desired color and when dry I think you will find a floor-covering similar to linoleum. A coat of clear varnish on the paint adds to the wearing qualities, but is not necessary.

Mrs. J. A. M., Texas.

For N. H., of Indiana

A sure exterminator of bed-bugs is a mixture of gasoline and camphor. Buy gum camphor and put it in the demijohn containing the gasoline. Let it set over night and in the morning shake it good and hard. Apply with a syringe to the mattresses, bedstead, walls, molding and crevices. Leave the room unoccupied for a couple of days. Don't use gasoline near a fire or artificial light.

Another good exterminator is an ounce of corrosive sublimate dissolved in a gallon of gasoline. Apply it with a plant syringe or feather to every crack in the walls and floors, beds and woodwork. This will discolor nothing and may be used freely on mattresses. It is well to do one room at a time and then shut it up for twenty-four hours, letting in the sunshine. Be careful not to use any matches around the gasoline as it is highly explosive. The corrosive sublimate is deadly poisonous.

For Mrs. E. K. B., of Kentucky

Here is a recipe for green-tomato pie: Five or six green tomatoes skinned and sliced thin. Bake under crust first. Then put the tomatoes in and add one half teaspoonful of vinegar, a small lump of butter and one cupful of sugar. Sprinkle over it a little allspice and a generous tablespoonful of flour. Put on the top crust and bake for twenty minutes in a moderately hot oven.
Mrs. L. J. B., Kansas.

For Mrs. E. M. L., Ohio

If you will try the following recipe for mayonnaise dressing, I am sure you will find it very satisfactory. Separate the yolk from the white of one egg, and use only the yolk. Be very careful that none of the white of the egg becomes mixed with the yolk. Put the yolk in a soup-dish or fair-sized bowl. Add to the yolk one half teaspoonful of dry mustard. Mix well together. Then add olive-oil, a few drops at a time, stirring constantly and quickly while dropping in the oil. A cupful of oil will make enough salad dressing for six people. After all the olive-oil has been used, stir in a saltspoonful of salt and a little pepper. Finally, mix in two teaspoonfuls of vinegar, or the juice of a quarter of a lemon may be substituted for the vinegar.



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SLEEVE OPENINGS: Especially stayed with heavy thread lock-stitched hundreds of times.

FRONT PIECE: Double-ply, double stayed top and bottom, with double lock-stitched button-holes. BUTTONS: Four holes instead of only two—sewn on with extra heavy thread to stay.

BUTTONHOLES: Sewn through double thickness of cloth, heavily stitched.

THE SKIRT: With special double cloth stay and gusset double lock-stitched, untearable. FINISHED: Throughout all seams felled. Practically no raw edges.

POCKET: With special pencil-holder—solid, untearable.

NO SKIMPING: A big, generously made shirt—1 inch wider, 1½ inch longer, and the armholes ½ inch larger in diameter than any other.

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Write For Free Sample

Answers to May 10th Puzzles

The missing letters on the fence should read "Smith's four-dollar high hats."

The deeply injured female removed a tight shoe!

The Concealed Geography conceals Venice, Rimini, Senegal, Gath, Corinth, Bath, Calcutta, Elba, Lansing, Malta, Tarragona, Peru, Italy, Versailles, Oneida.

Poetical Decapitations require growing, rowing, owing, wing; trifling, rifling, I fling, fling; caprice, a price, rice, ice.

The checker-board may be cut as follows to make a square. The shortest game of checkers consists of twelve moves.



Answers to June 25th Puzzles

Mr. John Underwood's letter was sent from Keystone State and was dated "Friday (fried A), March 4."

In the Base-Ball Problem the Sockers win, because if they had the 2 score, the Sluggers, according to rule, would not have continued, after scoring 3 points.

The Clever Puzzle says: "Wise in one's own conceit."

The Rebus: A candlestick. That bicycle-rider could go a mile in 3 minutes 26 seconds if there were no wind.

Concealed Geography contains Lancaster, Arno, Sorrento, Reading, Borneo, Basil, Po, Orleans, Salem, Tacoma, William, Rica, Haven, Scranton, Rathisbon, Bristol, Cowes, Normandy, Albania, Liege, Ostend, Ghent, Madawaska, Labrador, Granada, Iowa, Mense, Lyons, Acre, Siam and Iser.

In the problem of the hare and the hounds,

the hounds gain 6 rods in every 21, which makes the race 336 rods.

Awkward Moments

THERE is a story of a young man who, as he gallantly escorted the belle of the evening to the carriage after the party, said gushingly: "I have been eagerly waiting all evening for this moment."

This is a fair illustration of the way in which our tongues put us into awkward positions by causing us to say things with a double meaning, and we are never more apt to do this than when we are trying to say something flattering. An ardent admirer of the great French actress, Mme. St. Denis, found that he had "put his foot in it" when he was trying to be most complimentary. The great actress had just given a powerful presentation of Zara, and after she had left the stage she said to her admirer: "One should be young and handsome to act that part well."

"Ah, no, madame," said her friend, "you are convincing proof to the contrary."

A Boston man attending a large reception in Washington was introduced to a very pompous lady of about fifty years. The conversation chanced to turn upon the merits of a popular periodical with which the gentleman had once been connected, and that was at that time eighty years old.

"It is an excellent paper, an excellent paper," said the lady graciously. "I have taken it for thirty-five consecutive years—think of it, thirty-five consecutive years."

Having in mind nothing but the age of the paper, the heedless man said: "Oh, indeed? Well, you might have taken it twice thirty-five years!"

"Oh, do you think so?" said the affronted lady with a withering look.

Suddenly conscious of his blunder, the embarrassed man said awkwardly: "I mean that the paper of which we have been speaking has been published for eighty years, so, of course, you could have taken it for twice thirty-five years if you had cared to do so."

Then he fled to the dining-room for refuge from a still more withering look.

It was at an afternoon tea and the hostess was bidding adieu to a departing guest whose daughter had recently married and gone to a little town out West to live.

"Remember me to your daughter when you write to her," said the hostess.

"Oh, I will!" was the reply. "She will be so glad to know about you and your tea. You see since she went out to that stupid little town to live she is interested in the least trifling thing here at home!"

An enthusiastic lover of the country was a guest at a dinner-party in the city. During a little lull in the conversation the hostess said: "I hear that you are very fond of the country, Mr. Blank."

"Fond of it," was the enthusiastic reply. "I adore it! I only wish I was there this minute!"

The story is not a new one of a member of parliament who was at a reception and who turned to a man next him and asked: "Who is that almost grotesquely homely woman with the hideous yellow dress over there by the piano?"

"That," was the icy reply, "is my wife."

"Oh, no, no," said the embarrassed parliamentarian. "I don't think you understand me. I mean the woman with the pale yellow dress to the right of the other woman."

"That, sir, is my daughter!"

A family named Sparrow, consisting of Mr. and Mrs. Sparrow and their son and two daughters, had applied for letters of dismissal from the church they had long attended, in order that they might unite with a church in a distant city to which they were about to go. It was somewhat urgent that they have their letters at once, and a special business meeting was called preceding the regular Sunday-morning service of the church. After letters had been granted to Mr. and Mrs. Sparrow, James, Mary and Ellen Sparrow, the minister announced that he would preach from the text: "For ye are of more value than many sparrows."

MAX MERRYMAN.

FARM AND FIRESIDE

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THE NATIONAL FARM PAPER



ESTABLISHED
1877

AUGUST 25
1910



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“Want to smell my bouquet, Bossy?”

A Visit With the Editor

AS IN most university and college towns, there is a summer school at Madison, Wisconsin. They had one this year. If you live convenient to a college town, look over their list of lecture courses next year, and, if you can sneak away from the crops and the stock for a day or so, go. Most of the lectures are open to the public, and all of them are worth while. Universities do not put on their official list the lectures of the untried speaker or the unbaked thinker.

Farming is too strenuous in the doing to make summer lectures on agriculture practicable; but at Madison this year there was one conference that concerned farmers. It was a conference on the relation of the churches to rural life. It was organized by the university pastors of the various churches in Madison.

I wish you could have been there. You would have had a chance to see the other side of the shield. You may or may not go to church, but you have, anyhow, some notions of churches from the viewpoint of the fellow who drives to the church—or country school-house—and tries to tie the team so that the flies won't make them break loose while he and the family go in and listen to the sermon and, maybe, join in the service at the proper places.

But here you would have looked at it from behind the scenes, as it were. You would have got an idea of the problems that confront the ministers themselves.

I was startled at what one clergyman said to me after I had given some of my ideas to the conference.

"The country church," said he, "is dying!"

You would have been startled, wouldn't you, at such a statement. I know I was. I believe what he said, but his saying it was startling. And then the thought came that there is no need for us to doubt or lose faith. Things die in this world when they are unfit to survive. The crust of the earth is sown with the fossils of things that could not live—the pterodactyl, or flying lizard, the mammoth with his huge curved tusks, the saber-toothed tiger, the cave-bear, the glyptodon, the dinosaur, the three-toed horse, the enormous plants of the carboniferous age when our coal was laid down, birds, reptiles, mammals, plants—they died and the place that knew them knew them no more.

Does the thing which is fit for survival ever die out? I don't know; but I think not.

The things men find useful, they do not allow to go out of use. We have forgotten how to shoot with the bow and arrow, and the plowing of the ground with a sharp stick is a branch of farming at which we are vastly less skilful than were the squaws who grew corn where the back field is now, in the years before Columbus discovered us. We have forgotten the bow and arrow for the same reason that we have forgotten the stick cultivator—because we have something better.

But if the country church is really dying—as this minister said to me—is it because we have something better? If so, what is that better thing? Isn't this a matter well worthy of our thought? It seems so to me.

Oh, yes! He knew what he was talking about. He has the task of finding preachers for the vacant pulpits in a great denomination in a great Western state. He knew what he was talking about—and he said "The country church is dying!"

If so, what is killing it?

A church dies from one of two causes. Its clergy may fail to meet the demands of the time and place or its membership may fall away from it by reason of other interests. Our schools we make ourselves. We elect the directors and we have the sort of teachers that, on the whole, we want. If the country schools are not what they should be, the country people are to blame. But how about the country church? Is that within our influence so that we can mend it if it is worn out or end it if it is hopeless? Whence come the influences that make or mar the country church?

Many of our readers will say that God rules in an especially close relation in the churches and that he will take care of the matter. Then is He causing the country churches to die in this great Western state? And if so, why?

Once a German farmer was asked to contribute to a fund to put a lightning-rod on the church. He looked the subscription paper over and handed it back, shaking his head.

"If the Lord want to t'under his own house down," said he, "w'y, let him! I give notting."

We know, however, that the church, house of God though it be, will be "t'undered down" just as quickly as the saloon—sooner, if it has a high steeple and stands on a hill. And we know that the churches will die if men let them die, just as quickly as would a school or a breeders' association. For the churches are means, not ends; tools, not work; and if they become unfitted to effect their ends, they will give way to other means, and if they fail as tools, other tools will be found to do the work.

The problem is complex. Much of the work of its solution must devolve on those institutions which prepare ministers for their profession. If the men they are educating for the ministry fail in the rural churches, they should look to their course of study.

We have found that the school which is a copy of the city school is not fitted to the service of the country life. May it not be that the church which is a copy of the city church is equally wanting in adaptation to our uses?

When a minister says that the country church is dying, is it not worth the

while of the farmers seriously to ask themselves whether they want it to die, and if not, what they can do to save it?

One pastor said that the chief trouble is that the young minister takes to preaching in the rural districts in the hope that he will soon be called to a town charge that he looks upon the rural work as temporary.

It may be urged that Jesus was willing to start his church with a dozen members, most of whom were poorer and more ignorant than the people of the average rural charge, and that he never tried to get called to the office of chief priest at Jerusalem; but this doesn't seem to illustrate any particular point to the men who are trying to fill the pulpits in the country. The fact remains that the rural charge has to be turned over to the leavings and culls of the ministry.

(If you show this to your minister, as I hope you will, please explain to him that by "leavings" I mean leavings of time after the capable minister of a town church has used himself up in the affairs of the town, and by "culls" I mean just what the pastors meant, that the ablest of the profession are "culled" out and sent to preside over big churches, and the rural churches are left to those who can not attract the notice of those who are doing the culling.)

Of course, it is impossible for the young man who is listening for the call to a broader field in the city to get into complete accord with the life of the country. He is a sojourner for a day. He folds his tents in the morning and moves on.

You can't build up a farm by placing it in the hands of a new tenant or owner every spring. If you place it in the hands of men who are expecting to go to the city as soon as they can get a job there, the land will fail in fertility. It will soon take its place with those fields which remind the passer-by of his old Scripture reading, and the traveler along the road will mutter under his breath all he can remember of the immortal picture of the run-down farm:

"I went 'by the field of the slothful, and by the vineyard of the man void of understanding; and, lo, it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down. Then I saw, and considered it well; I looked upon it, and received instruction. Yet a little sleep, a little slumber, a little folding of the hands to sleep: So shall thy poverty come as one that travelleth; and thy want as an armed man."

If the rural church field—the "Vineyard"—is grown up with nettles and covered with thorns so that it is no longer bringing forth fruits, it must be because some one is "slothful" and "void of understanding."

Who is it?

Probably many of the weeds and thorns and the breaks in the stone wall are chargeable to the people of the rural districts themselves; for isn't a part of the Vineyard theirs?

But I feel sure that a good deal of the condition of which my pastor friend spoke is owing to the fact that the church has felt obliged to place the pastorates in the hands of men "void of understanding."

If the rural church is to survive and do the work it hopes to do, it must not be in the hands of the weakest preachers and priests, but of the strongest. It must not be in the hands of men who have their ears cocked up for the sound of a call from the city, but rather of those who are ready all their lives long to be country parsons who will learn their trades and make their churches over into agencies for helping people to live in this world—on farms.

Men who will devote themselves to the country church may be scarce; but if so, Christians are scarce in the ministry—real Christians who are willing to act on the truth that he who would save his life must be willing to lose it.

Are they so scarce?

I have in mind the ideal country pastor. He would have the spiritual gifts which make men give their lives to service and he would be the best farmer in the parish.

What a pastor Dean Henry of Wisconsin or P. G. Holden of Ames or Hopkins of Illinois or Secretary Wilson would make! We should flock for miles to hear any of them tell of the wonderful way in which the successful farmer, as the Scriptures have it, "walks with God."

And what a country pastor Doctor Knapp of the Bureau of Soils would make! He would show the people how to grow cotton and corn, and then would add: "If it takes so much pains to make things right for the growth of these things, how can your boys and girls become good men and women with less?"

And for any of these men, if they would carry their sympathy with farmers and their mastery of farming into a pastor's life, the living would come. The great laborer is always paid—at least he always lives. And when the church will furnish the men ready to devote themselves to the rural church, the rural church will take on new life just in proportion as it takes on new service.

Some of you may think all this uncalled for. You may think the rural church all right as it is. Well, in that case, I rejoice with you—only how did my pastor friend happen to say "The country church is dying?"

One of these days a real country pastor whose church is not dying will tell you all about it in FARM AND FIRESIDE.

Robert S. S. S.

A Prayer

Teach me, Father, how to go
Softly as the grasses grow;
Hush my soul to meet the shock
Of the wild world as a rock;
But my spirit, prompt with power,
Make as simple as a flower;
Let the dry heart fill its cup
Like a poppy looking up;
Let Life lightly wear her crown,
Like the poppy looking down,
When its heart is filled with dew
And its life begins anew.

Teach me, Father, how to be
Kind and patient as a tree;
Joyfully the crickets croon
Under shady oak at noon;
Beetle, on his mission bent,
Farries in that cooling tent;
Let me, also, cheer a spot,
Hidden field or garden grot—
Place where passing souls can rest
On the way and be their best.
—Edwin Markham.



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The Best Teachers for the Country

By Jessie Field



The Best Crop

YES, country people can have the best teachers—just as they can have the best homes, the most beautiful surroundings, the greatest comforts—if they only think they can. About three years ago a farmer came into my office and said, "It's no use talking. We can't have the best teachers in our country schools. Last year we had a fine one, but she has a job teaching in town this year." I listened to see what more he would say. "Then they have it harder out in the country. They have to build

fires and sweep and there are no sidewalks and it's hard to get a good boarding-place. It's no use. You can't get the best teachers to stay in the country."

"Let's see," I asked. "You say you had a fine teacher last year. What did you pay her?" "Thirty-five dollars a month," he answered. "And how much is she getting this year in town?" But this he did not know. "Well," I added, "it may be of interest to you to know that she started in this year with fifty dollars a month and will have an increase each year that she stays and does good work. Of course, we can not get the best of any kind of workers unless we pay for them. But I can't see why Iowa farmers on this two-hundred-dollar-an-acre land, receiving the highest prices for all they raise, can not afford as good teachers for their children as the people in town can for theirs."

Of this I am sure, country people can get the very best teachers in our land into their schools, but they can not do it while they think as this farmer did. As D. Ward King says, "We'll have to get our heads right first." There are many farmers who do "have their heads right" on this school proposition and their children are having the best school advantages to be had anywhere.

I had not been among the country schools of Page County long, watching the work of the teachers who failed and teachers who succeeded, until I discovered that there were certain qualifications that every teacher must possess to be truly fitted to teach a country school. She must have the strong scholarship, the pleasing personality, the ability to teach which all teachers must have. But, in addition to these common qualifications, it is absolutely necessary that she have three other strong points.

First, she must understand all ages of children. In town, she may work only with the little ones and be a primary teacher or she may be fitted by nature especially for the grammar grades—but in the country, by training and by native ability, she must be able to do well for all grades. She must be a general indeed.

In the second place, she must be a leader—not only a leader of children, but a leader in the community life. The Country Life Commission found this to be one of the greatest weaknesses in country life to-day—the need for leadership. Who can better fill this need than the country school-teacher? And where is there a better community center than the building that belongs to every one in the district—the country school-house? But most important and necessary of all, she must really love the country and see the great possibilities for its development. She must be in touch with the spirit of the great movement that is being made for "Good farming; clear thinking; right living."

This, then, was the problem: Given one hundred and twenty-eight rural schools in this county, to secure for them an equal number of teachers of strong scholarship, personal fitness, ability to teach all grades, qualities of leadership and a love for and understanding of the country. There were some teachers in the county who had these qualifications. I decided that I must work through them and through their schools to show the people and to show other teachers what the country school might mean to the country community.

So in the spring of 1906 I called in to my office twelve of the strongest teachers in the county. Prof. P. G. Holden from the Extension Department of our

State Agricultural College met with us and together we talked over plans for bringing the country schools into closer touch with the life of the country. I remember well how earnestly Mr. Holden talked, with some corn-stalks and some corn on the table in front of him. The teachers went back to their schools enthused and in earnest.

That summer at our county institute an afternoon was given to country-school problems especially. Again Mr. Holden was with us and a number of the most progressive farmers of the county. At this time the twelve teachers reported what they had done in their schools—not theories, but facts. One teacher said, "Some of my boys that wouldn't go across the road to get a song-book went three miles in the snow one night to get some sawdust for a germination-box." Another reported, "When we got to work in our school, we soon had all the fathers in the district down to the school-house and it helped our school in many ways. And so the enthusiasm spread throughout the county."

A voluntary organization of country school-teachers was formed to study the problems peculiar to the country school and to come into closer touch with country life. Once a month during the school year these teachers meet together in convenient points and study and discuss the problems of the farm and the school.

One day last winter I drove into a country home in

salaries and added materially to the school equipment. After the discussion was over there was a social half-hour with coffee and cake served by the teachers.

I have yet to find a district that will not gladly pay well for a teacher when they realize what she can make their school worth to them. Four years ago a teacher who was fitted for country-school work took a school just a mile from our county seat. The school was small, many of the patrons were sending their children to town school. They had changed teachers about every term, the wages were low, the property run down, the school poorly graded and, in a word, no one seemed to care for the school. Gradually I saw that school transformed and this transformation reached out into the district, too. To-day, there is not a stronger school in the county. They still have the same teacher and are paying her fifty-five dollars a month. The people believe in their school. Last Arbor Day they all came in with well-filled baskets, surprised the teacher and worked all day helping fix up the school-house and grounds.

The teachers in this county to whom the people are paying good wages are, without exception, those who are working along the line of country-school improvement in the teachers' club. We have one teacher receiving sixty-five dollars; two receiving sixty; a number receiving fifty-five and fifty. And I am sure that these teachers are giving far more value received for the money than are those teachers who are receiving forty dollars a month.

We are trying to keep our teachers in the same schools long enough really to accomplish something for the school and the district. Every year has seen a decided increase in the tenure of office. We have one teacher in our county—a wonderfully strong teacher—who has been teaching in the same country school for twenty-two years. Many times she has been offered other positions, but her district appreciates her work so much that she has preferred to remain and so become a real influence there.

It is the greatest pride of Page County's schools that six of her county school-teachers who were offered grade positions refused them to remain in their country schools. Why? Because they believe in the country and because country people believe in them and can afford to pay them as much as they would get in town. We are glad to honor a successful, reflected principal of a graded school, who accepted, instead, for this year, a country school where she now rules and reigns supreme in the hearts of both pupils and patrons—a greater teacher than whom there is none in Page County.

We believe that we have learned how to appreciate better the loyal and conscientious work of our teachers here. We have tried to

quit using that time-worn phrase when asked about the teacher's work, "Well, I haven't heard any complaint yet," and the spirit that goes with it.

For the past two years we have conducted a model country school in connection with the teachers' institute, running a hack back and forth each half-day so that every teacher might visit it. This year our county farmers' institute offered twenty-five dollars in prizes to the teachers writing the best articles on the subject, "How Can We Make Country Schools Worth More to Country People?" Those winning prizes were read on educational night.

In some cases we have been able to secure stronger teachers by temporarily closing a small school and having the pupils attend the neighboring school. In three village schools of two rooms we have found it possible and far better to put both rooms together and pay the money which we would have paid two average teachers, to secure one exceptionally strong teacher.

We have the problem to face of barely enough teachers to fill our schools and the fact that, in many cases, we must fill up our ranks with graduates from town high schools who look upon their work in the country schools as only temporary. Nevertheless, we have worked this teacher problem out far enough so that I am very sure that any country district that is really in earnest and the people of which realize their worth can secure the very best of teachers for their school. And having secured such a teacher, all other good things will follow for their school and their children.



Page County People Take an Interest in Their Schools. This Practical Farmer is Helping the Boy Out With His Corn-Judging

the south part of the county and had hardly stepped over the threshold when the telephone rang and I found that I was wanted—I wonder sometimes how they always know where I am. I found that it was a teacher from one of the north townships calling me to see if I wouldn't come up there the next afternoon. She said that the teachers who belonged to the club in that township had invited the directors and their wives and the school officers to come in and meet with them at their regular monthly meeting.

Well, the roads were drifted full of snow and the place of the meeting was sixteen miles from the place where I was, but I did want to have a chance in helping on that meeting, for this was one of the townships where we had been trying very hard to give the boys and girls a better chance than they had in their schools. So I started early the next morning and drove up there.

The meeting was called for half-past two. The teacher had taught that day without recess and with a short noon so that they could get all the work in. One teacher walked four miles to get to the center school where we met. But it was worth while. First the teachers conducted their regular meeting, discussed and reported on some work they had been looking up in regard to alfalfa and, also, the different kinds of harmful weeds in the township and how to exterminate them. The directors were very much interested and gave many helpful and practical ideas. Then the discussion drifted to the needs of the schools of the township, and as a result of that talk the township lengthened the school year, increased the teachers'

Conservation Versus Spoils

Yakima Valley Experience Illumines a National Issue—By Joel Shomaker

THIS country has too many farmers and not enough sheep," said the wealthy rangeman, pointing the finger of scorn at a new settler who had entered upon a homestead in the desert. "That fellow will starve out there in the sagebrush. He has been brought here under the impression that he can make a fortune. The fact is he can not grow anything without water and that is not available."

"Do not be so sure about that," I suggested, as the sheep baron turned upon me and frowned like a grizzly bear about to spring at his quarry.

"You are one of the men who should be held responsible for this work," he said. "You keep writing to the papers about the possibilities of this section as an agricultural field. Why don't you tell them that the water is all appropriated and all the good land is now under cultivation? Tell the truth and let the people go elsewhere."

"I am telling the truth when I state that there are opportunities in this country for thousands of home-builders, who can produce fruits, vegetables and alfalfa," was my response to this personal remark.

"Now, see here, young man," said the sheep-owner, getting a little more confidential, "you are writing for the papers to make a living. The paper-publishers don't care which side you take, so long as they get the news and subscribers. There is more money in writing our side of the story than in working for the farmers. They are generally a poor set and have no influence. If you would do right, we might find something in the political line for you."

"But the editors of respectable newspapers do care for what they print and whom they have for correspondents," I quickly announced. "And if there are any poor farmers here, they are probably in that condition because of being harassed to death by sheepmen. So far as the pay is concerned, I want to say that neither you nor your whole band of free rangers on the government lands can muster enough money to hire me to write anything against the farmers or their occupation."

That conversation records one chapter in a scene enacted in the Yakima Valley of Washington about eight years ago. It indicates the conditions then existing and illustrates the spirit of antagonism shown in some places to colonization, immigration

and irrigation. At that time the county of Yakima, now recognized as one of the richest intensive agricultural sections of the West and heralded throughout the world as the land of big red apples, had less than forty thousand acres under cultivation. The farmers were struggling for an existence and were forced to combat the sheepmen, who trampled over their fields and made life miserable for them. The system of unrestricted grazing was permitted on the mountains, and as a natural result the water supply for irrigation and other purposes decreased during the summer months. That brought on litigation among the farmers over priority water appropriations and caused general disorganization.

Then the people sought relief from the Congress of the United States, and Hon. George Turner, at that time senator from the state of Washington, introduced a bill prohibiting sheep grazing on the Rainier Forest Reserve after January 1, 1903. The bill never became a law presumably because the politicians were not ready to adopt measures for the practical conservation of natural resources. And politicians probably will never be ready to do anything for conservation until public sentiment demands that places on the congressional roster shall be filled by the names of men willing to declare themselves flatly as advocates of a conservation policy.

The action of the farmers of central Washington marked the beginning of a campaign for protecting the rights of the people in that state, against the invasions of interests carrying corporate wealth and political influence as dictatorial wands. It has brought forth fruits in many fields. But the opposing forces are still in action, and those opposing the farmers in their fight for water, eight years ago, are generally lined up with the enemies of conservation.

Some interesting facts, showing the necessity for organized efforts in conserving the natural resources, were brought to light in Senate Document No. 403, printed for distribution at the first session of the Fifty-Seventh Congress. The report of the government hydrographer, stationed at North Yakima, showed that the flow of water in the Yakima River, which comes from the watershed of the Rainier Forest Reserve, had decreased from 14,030 cubic feet per second, on June 1, 1897, to

3,390 cubic feet per second, on June 1, 1900. Farmers testified that they had resided in the valley for thirty years and had not noticed any decrease in the flow of the stream until bands of sheep were grazed at the headwaters, destroying the grasses and undergrowth—the reservoirs of Nature, created for the purpose of retaining soil moisture until required in the valleys below.

Conditions have changed under the present system of handling the forest reserves. The service is not confined to political manipulators. Residents in the vicinity of the reserve have privileges formerly granted to a few individuals possessing large bands of sheep. And, because of the restrictions placed upon those nomadic wealth-collectors of the past, there is a cry going up against those who desire to save the nation's resources for the people.

That doctrine of the First National Conservation Congress that all the remaining natural resources in land and water should belong to all the people is abhorred by the men who have hitherto enjoyed special privileges. And the teachings are not sound to the politician who no longer has the parceling out of the resources of the people to those best able to return political favors.

The farmer has come into his own in the past few years. His crops have paid the mortgages, held by capitalists, the results of former bad years and low prices. And he desires to see the resources in soil, water and forest protected in order that past conditions of poverty may not be repeated.

Brigham Young, the founder of Utah Mormonism and builder of a great commonwealth, saw the necessity for holding his people in the fields of agriculture. Two thousand worn, ragged and overzealous men and women arrived on the shores of Great Salt Lake, on a hot day in July, 1847. They had but little to eat and were thousands of miles from the base of supply. Around them stood mountains containing rich treasure-vaults of gold and silver. But the church leader commanded that all mineral finds should be hidden until agriculture had been developed far enough to insure plenty of food for all the people.

The Canadian government is expending large sums of money in advertising the extensive natural resources of the unde-

veloped Northwest. Their literature appeals directly to farmers and, in an indirect way, causes the reader to infer that only farmers are sought as future residents of the country. A great army of men and women passes over the border every year, and I have never heard of one making a failure. On the contrary, I am personally acquainted with scores of young men who have succeeded beyond the expectations of the most optimistic Canadians.

Our friends to the north observe the principles of practical conservation in soil, forest and human life. The young men of our country go there almost certain of success. They get away from the old paths of partizanship and political trickery and find wealth in working, thinking and doing for themselves. They no longer vote the party ticket because their fathers did and waste time and energy in carrying torches and shouting their lungs away in the thought that they are saving the country.

The farmers are the class most directly interested in fostering the national resources, because they are permanent residents, tax-payers and burden-bearers in the world of to-day and to-morrow. Professional politicians and their backers, the beneficiaries of special privilege, are the active opponents of conservation.

The politician cares little for the future of its resources. He proclaims that "we do not want to pile up forests, minerals and other resources for the people one hundred years in the future. Posterity has never done anything for us." That argument is taken as final among the speculators, skimmers of the earth and destroyers of forests.

An established rule of life, formed many years ago, has directed my political thoughts through every campaign. That rule is never to vote a purely partizan ticket because it is indorsed by a party convention or the partizan press. The candidate must exhibit more than the spirit of partizanship to entitle him to recognition at the polls and the officeholder must rise above party, in all his actions, if he expects to regain the place at a coming election. The people should stand above party in everything. This country is too broad and too great to be dictated to by any partizan or controlled by any party organization, seeking to perpetuate its offices and powers.

What Brings Big Wheat Crops?

By F. A. Welton

THE average yield per acre of wheat in Ohio is only fourteen bushels. On ground of average fertility only, which had been under tenant husbandry for about a quarter of a century, the Ohio Station, under the supervision of Director Thorne, has secured as an average for fifteen years a yield of 27.03 bushels. This is, of course, not an extraordinary yield. The significant fact is that on this particular soil the average yield for the last five-year period is 12.57 bushels per acre more than it was for the first five-year period. (The average yield for the first five years was 20.53 bushels and for the last 33.10 bushels.) Furthermore, the increase has been such as to more than pay for itself from the first. It is quite evident, therefore, that increasing the wheat yield is a practical business proposition for any farmer and especially so for the farmer with limited means.

How was this increase brought about? Undoubtedly the management of the soil, including rotation of crops and use of fertilizers, is of foremost importance.

For fifteen years the Ohio Station has been growing wheat in a five-year rotation of corn, oats, wheat, clover and timothy in the order named. In this rotation five fields have been employed so that a harvest of each crop has been obtained each year. On another tract of land, adjacent to the above and of the same original fertility, wheat has been grown continuously throughout the same period. The tracts, both under continuous cropping and rotation, have been subdivided into plots, some of which have received no fertilizers during the entire time, while others have received barn-yard manure and still others commercial fertilizers. A comparison of the two systems of cropping, both with



Wholesale Variety Testing at O. A. E. S.—Four Ranges of Tenth-Acre Plots—Each Trying Out One Hundred Different Varieties of Grains and Grasses Annually

and without manure and commercial fertilizers is given in the following table.

| System | Treatment | App. per acre per five year | Av. yield per acre per five-year period | | |
|------------|------------|-----------------------------|---|----------|----------|
| | | | First | Second | Third |
| Continuous | Nothing | | 10.1 bu. | 8.4 bu. | 6.2 bu. |
| Rotation | Nothing | | 9.3 bu. | 8.5 bu. | 13.7 bu. |
| Continuous | Manure | 25 tons | 15.8 bu. | 18.5 bu. | 17.5 bu. |
| Rotation | Manure | 8 tons | 11.5 bu. | 14.7 bu. | 24.5 bu. |
| Rotation | Manure | 16 tons | 12.7 bu. | 19 bu. | 30 bu. |
| Continuous | Com. Fert. | 2150 lbs. | 19.8 bu. | 21.9 bu. | 17.4 bu. |
| Rotation | Com. Fert. | 1070 lbs. | 20.5 bu. | 27.5 bu. | 33.1 bu. |

In the continuous cropping system it will be noted that under all conditions the yield for the third or last five-year period is less than that for the second, a fact which indicates that ultimately the yield of wheat is almost certain to decline when grown continuously on the same land, even though liberal quantities of manure or fertilizers be used. On the unfertilized

plots the decline has been gradual from the first, but on the fertilized plots it has followed a gradual increase during the first eight or ten years of the test.

A remarkable fact to be observed is that, in the continuous cropping system, twenty-five tons of manure per five years is now producing less by seven bushels per acre than is only eight tons per acre when used in the five-year rotation system. And practically the same thing is true in the use of commercial fertilizers. Ten hundred and seventy pounds of high-grade fertilizer per five years used in the rotation is now producing almost twice the yield that twenty-one hundred and seventy pounds is producing under continuous cropping. These facts leave but little doubt as to the necessity of rotation.

A great deal also depends upon the

kinds of fertilizers used in connection with rotation. The following table gives the total fertilizing materials in pounds per acre for each five-year rotation, the cost of the same, the total value of increase per acre (based on the increase of all crops in the rotation) and the fifteen-year average yield of wheat per acre.

| Fertilizing materials in pounds per acre for each rotation | Cost of Fert. | Tot. val. of increase per acre 15-yr. av. | Yield per acre, 15-yr. av. |
|--|---------------|---|----------------------------|
| Acid phosphate, 320 lbs. | \$ 2.60 | \$16.48 | 18.38 |
| Muriate of potash, 260 lbs. | 5.50 | 6.31 | 11.97 |
| Nitrate of soda, 480 lbs. | 14.40 | 8.67 | 12.77 |
| Muriate of potash, 260 lbs. Nitrate of soda, 480 lbs. | 20.90 | 10.09 | 13.51 |
| Acid phosphate, 320 lbs. Muriate of potash, 260 lbs. Nitrate of soda, 480 lbs. | 23.50 | 38.94 | 27.03 |

It will be seen that acid phosphate has produced 6.41 bushels more than muriate of potash, 5.61 bushels more than nitrate of soda and 4.87 bushels more than muriate of potash and nitrate of soda combined. The highest yield, however, has come from the use of a combination of all three.

Figuring financially, \$2.60 invested in acid phosphate has produced an increase greater than \$6.50 worth of muriate of potash. \$14.40 worth of nitrate of soda or even \$20.90 worth of muriate of potash and nitrate of soda combined. Furthermore, when \$2.60 worth of acid phosphate was added to \$20.90 worth of muriate of potash and nitrate of soda, the value of the increase was raised \$28.85.

These facts do not, by any means, indicate that acid phosphate should be used to the exclusion of other fertilizers. They show simply that this particular soil is in special need of the element of fertility

[CONCLUDED ON PAGE 5]

Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks



Kicking Poke

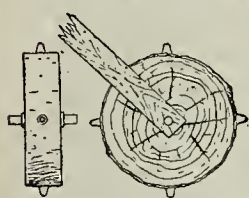
THIS simple apparatus will break any horse or mule that kicks with both hind feet at once and a great many that kick with one foot at a time.

Procure a piece of hard wood about twenty-seven inches long and about one and one half inches square. About one inch from the end bore a three-eighths-inch hole and about two and one half inches from this hole bore another, and at the same distance a third. Have the blacksmith make a small clevis (C) with a one-and-one-half-inch opening to fit the stick and large enough to allow a hame-strap to pass between stick and clevis. Take two pieces of three-eighths-by-three-fourths-inch iron (AA) about ten inches long, drill two holes in each about one half and three inches from the end. Place these pieces in a vise with the second hole one inch below the jaws and bend out about two inches. Now bend the ends of these irons around a straight bit (B), and weld. Bolt or rivet these pieces to the stick. The finished poke should measure about thirty-two inches from bit to end of stick.

Now fasten the bit to the bridle in the ordinary manner and put the bit in the animal's mouth with the poke hanging down. Put hame-strap through the clevis at the end of the poke and around the collar at the throat; adjust with the holes in the poke till the animal's head is raised about as high as he is ordinarily checked. Encourage the animal to try to kick with his head thus held. I never knew but one horse to try it more than twice. As he shows improvement, let up on the hame-strap until the animal carries his head naturally. At the end of a few months of careful handling you will find your animal broken of his habit.

RALPH W. BROWN.

Shows Where Seeds Go



ONE handy device we have on our farm is a row and hill marker. Make a solid wheel about four inches thick and as large a diameter as desired. We saved ours out of a log. For handles use ordinary plow-handles with half-inch holes bored in ends for half-inch rod which serves as axle. Get a piece of piping a little larger than axle—so it will work freely—and about two inches longer than the thickness of the wheel and insert in a hole in center of wheel, tightly. Then put axle rod through this and the wheel will run true and steady. Use washers on axle at each end of pipe to prevent pipe cutting the wood of the handles.

To mark places for the hills, make small pegs about three fourths of an inch long and half an inch thick of soft wood that does not split easily. Drive a small nail through these endwise and let point of nail extend a half inch or more through the peg to be driven into the wheel. Do not drive nail up, but let the head extend far enough above the peg to get a hold with a claw-hammer, so the peg may be drawn and moved.

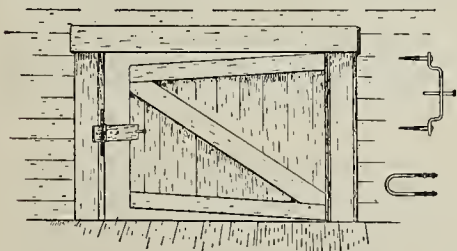
A wheel forty-eight inches around is convenient, as by using four pegs we can mark hills twelve inches apart, three pegs sixteen inches, etc.

We use this tool to aid the little folks to put in seeds and plants at proper distances and to get the drill straight and regular.

R. W. ROBERTSON.

Anti-Slam Door Attachment

HAVING a door opening outward in the upper story of a building which I wished to keep partly open, I designed this fastening. Taking a narrow board of suitable length for the door I bored a large hole through one end and slipped a long "U" bolt through the hole, boring in the door two small holes for the end of the bolt and fastening them in position by a nut on each side of the door. Having previously bored numerous holes through the board, I fastened a piece of strap iron on the door-post, about where a latch would be, in a shape to make a slot for the board to slide freely through. With a



hole in the strap iron and another in the door-post, both the same size, and a long pin to go through these holes and the holes in the board, the door can be pinned open at any angle desired.

In the accompanying diagram the strap iron fastening and the "U" bolt are shown in detail at the right. I made the irons myself, but those not having a forge could make the fastening of wood and use a common strap hinge for attaching end of board to door.

PAUL R. STRAIN.

The Ideal Ideas

THE Headwork Shop is not meant for inventors or for specialists, but for farmers who have some knack peculiar to themselves in doing some particular thing. It may be in draining land or making the best use of a field. It may be in planning a watering-trough or blanching celery. It may be mixing fertilizers or economizing water in irrigation. It may be pumping or pumpkins, hogs or hominy, breaking-plows or breakfast, pruning an orchard or priming a hay-rake—if it is useful, well tried and original or even rare, send it in. We have had a lot of ideas submitted, but, with all thanks to the contributors, they are too much of a sameness; just as if a lot of fellows had sat down and wrinkled their foreheads and said, "Now for a five-dollar idea for the Headwork Shop!" You won't notice this in the ones published, we hope; but we refer to those that came in and were not published. They didn't seem quite clearly the proven fruit of experience. Give us a leaf out of your farm life. Didn't you ever do something that after it was done made you slap yourself on the leg and exclaim, "That's genius!"

Well, send it in. This means you!

By the way, are you voting on these ideas? Get in line and vote. EDITOR.

Make Your Own Roofing

THERE are a good many cheap roofings on the market to-day, but here is the best cheap roof I know of.

On each square (one hundred square feet) of the cheapest three-ply paper to be bought spread one gallon of coal-tar and dust onto this twenty-five pounds of common cement, continuing as long as the tar looks dark or damp. When dry, the cement will be as hard as if set in water.

I have a roof laid this way four years ago and it is as good as new, without a crack.

JAMES W. WARREN.

Self-Pulling Stumps

I HAVE been helping a neighbor clear a piece of ground. Wishing to rid the land of stumps we cut the roots of the tall trees, where not too big, and made the weight of the top pull its own stump. Even great pines will do this.

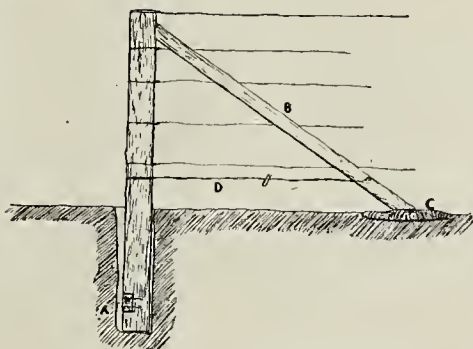
Old stumps we pried out with a great pry pole or worked flues underneath, soaked them with oil and fired them on a windy day.

C. E. DAVIS.

Caps to Save Hay

A GOOD hay cap is made out of unbleached muslin sheeting a yard and a half wide cut in squares. It should be hemmed at the ends, and buttonhole rings worked in the corners, through which pins may pass to hold it in place when in use. The pins may be made of No. 8 or No. 10 galvanized wire cut sixteen inches long and a ring made at one end. The cloth should be boiled in linseed-oil and wrung out with a clothes-wringer. If these cloths are stored away when not in use where the rats and mice can not get to them, they will last for many years.

M. G. RAMBO.



Economical Fence Anchor

THIS way of setting an anchor-post always saves one half the cost, and at a corner two thirds, and it is even more solid than the old two-post plan.

Dig hole at right angles to the lines of wire, four feet deep and about four feet long and wide as post. About six inches from bottom of post mortise post and fit in a two-by-four foot long made of some durable wood. Drive one or two spikes at A. If no mortise is used, spikes will soon rust off. Place solid brace (B) from top of post to large flat stone (C). Then put on several strands of wire (D) from bottom of post to brace and twist tight.

B. B.

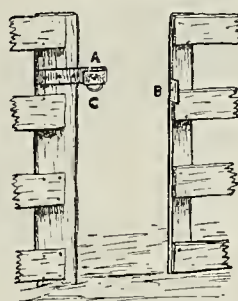
Labor-Saving Grain Drag

THESE frames are much used here in Virginia to haul grain or hay from fields to stack or threshers. They are low to the ground, enabling women and children to load them. A pole is tied over from front to rear and fastened at corners. To unload, take the pole off, pull the two standards out and let two men, one standing on either side of the front of the load, shove on the straw, at the same time starting the team. The load will gently slide off. In loading, place the butts of the straw out and don't let any press against the wheels.

The drag is floored with dressed six-inch strips nailed securely, an inch apart, to the crossbars. At points where the drag rests upon and crosses the bolster, there are iron pins which keep the drag from slipping off the wheels. These drags are generally eighteen feet long, six feet wide behind and three and one half feet in front.

E. W. ARMISTEAD.

A Self-Fastening Latch



A LIGHT piece of strap iron is bent upon itself at one end, thus forming a slot. Within this narrow opening an iron ring, like a harness ring, is placed and suspended on a rivet passing through both parts of the strap iron inclosing the ring. This part (A) is nailed to the gate or door post as shown

in the cut. On the gate or door a piece of strap iron is fastened so that when the gate or door is closed the projecting iron (B) shoves the ring (C) upward and when in place the ring drops back automatically and fastens the gate.

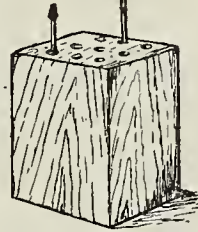
When required, a string fastened to the ring can be used to unlatch the gate or door when the ring is not otherwise accessible.

ALLEN THOMPSON.

Bit-Holder and Preserver

I MADE one of these out of a piece of walnut rail about fourteen years ago and am using the same set of bits that was first kept in it. Each bit bores the hole that is to be its own, and should be deep enough so that the worm of the bit is hidden in the block. When all bits are in place, pour oil into each hole, and renew this occasionally. The block not only keeps the bits from rusting, but they are protected from being dulled and broken by being thrown around among the other tools.

J. WESLEY GRIFFIN.



A Step-Saver

HERE is a handy device for watering the cow in the lot. We have water piped to the kitchen, the pipe coming up just outside the kitchen window. (This is in Alabama—no danger of freezing.) On a level with the window the pipe branches, one short branch going into the kitchen, with faucet at end to draw water for indoor use. The other branch turns down and runs underground to the lot, where it bends up and over into a tub. At the beginning of this branch pipe there is a faucet, which we can turn on from the window and thus run water down to the lot.

MRS. N. R. McLANE.

Pruning-Hooks From Files

THE accompanying drawing illustrates a tool which I have made from an old file and a broom-handle, and which should be of use to every one who has so much as a row of berry-bushes.

The hook or blade is forged from an eight-inch flat file. This particular one was made by heating the file in the kitchen-stove and hammering it on the head of an old ax. It is sharpened on the inner edge of the hook, which is about an inch and a half deep and roughly V-shaped. The handle is



split with a saw to receive the hook. A hole is punched through the shank of the hook and through this and the handle a stout nail is driven and clinched. The end should be capped with a ferrule.

The other end should be bound with strong wire about eight inches from the extremity and split with a saw. If this end is soaked in hot water, it can be opened and a cross-piece inserted for a handle.

Put on a pair of old gloves and go for the old canes in the berries. Hook them close to the ground and, instead of trying to cut them, twist them off with a jerk and a pull.

CARL CHURCHILL.

To Drag Hay

THIS is a device I use to haul hay-cocks to the stacks. Cut a willow or hickory pole about ten or twelve feet long. Bore a hole near the end and fasten a clevis in it. Tie a rope to the clevis. Slip the pole under the cock and bring the rope over and tie. Now hitch your horse to it and you can haul it almost any distance.

H. E. WHITE.

What Brings Big Wheat Crops?

[CONTINUED FROM PAGE 4]

carried by acid phosphate—namely, phosphorus. And what is true in this regard of the soil at Wooster is true to a certain extent of most of the soils in the state of Ohio.

This condition of the soil explains the fact that the cheaper fertilizer often gives better results than the more expensive. Ordinarily the cheaper fertilizer is a straight acid phosphate carrying from ten to sixteen per cent. phosphoric acid (P₂O₅), exactly the kind of plant-food needed by the soil, while the higher-priced fertilizer usually carries much less phosphoric acid (P₂O₅), but considerable quantities of the more expensive, but less needed, carriers of potassium and nitrogen.

Aside from the importance of rotation of crops and the judicious use of manures and fertilizers, much also depends upon the preparation of the seed-bed. If wheat is to follow corn, the fitting of the land must, of course, be done rather late in the season. When seeding after oats, however, the land should be plowed in late July or early August whenever possible. Early plowing tends to conserve much moisture, which otherwise would be lost.

Again, good varieties are essential for greatest success in wheat culture. Out of the many tested by the Ohio Station, a difference in yield of over seven bushels per acre due to variety characteristics alone has been found. The yields of twenty-five varieties, under test for twelve years, have been as follows:

Of the smooth wheats with red grain, Poole has averaged, for the twelve years, 30.82 bushels per acre; Perfection, 30.65; Mealy, 30.22; Harvest King, 29.98; Early Ripe, 29.49; Nixon, 29.15; Hickman, 28.66; Fultz, 28.57; Fultz-Mediterranean, 28.55; Early Red Clawson, 27.64; Red Cross, 27.41. Of the bearded wheats with red grains, Gipsy averaged 31.21; Nigger, 30.49; Valley, 30.42; Deitz, 29.17; Budapest, 28.96; Fulcaster, 28.96; Mediterranean, 28.10; Red Wonder, 27.84; Rudy, 27.83; Velvet Chaff, 26.43; Pride of Genesee, 25.65; Turkish Red, 23.90. Of the smooth wheats with white grain, Dawson's Golden Chaff averaged 31.39; Golden Coin, 28.85.

Of the smooth wheats with red grain, Poole, which yielded highest, is also in good favor with the millers. All things considered, it is probably well suited to a larger area than any other variety. Fultz probably ranks second as an all-around wheat. From the standpoint of stiffness of straw Fultz-Mediterranean is especially good. Gipsy not only leads the bearded red wheats, but ranks second among all the varieties tested. It is a good milling wheat. Dawson's Golden Chaff stands highest of all from the standpoint of yield. The quality of its flour, however, is not the best and it sometimes sells for an inferior price.

The time of seeding is affected by so many conditions that it is impossible to give any fixed rule. Climatic conditions, soil, latitude, the variety and several other minor factors, all exert an influence. The only available guide, therefore, is the average of yields from different dates extending over a long period, conditions being otherwise uniform. In an early and late seeding test extending over nine years wheat drilled Sept. 1 averaged 28.29 bushels per acre; Sept. 8, 29.87; Sept. 15, 32.18; Sept. 22, 33.44; Sept. 29, 31.96; Oct. 6, 27.30; Oct. 13, 24.97; Oct. 20, 17.17; Oct. 27, 13.14.

For the latitude of Wooster, then, the middle of September or a little later seems to be the most satisfactory time for seeding.

What is true in regard to date of seeding holds also in regard to rate of seeding. No definite rule can be established. The average yield for sixteen years of ten different varieties indicates that for the latitude of Wooster two bushels per acre is about right.

A word perhaps should be said in regard to treatment of seed for stinking smut, or bunt, as it is sometimes called. This is one of several fungous diseases to which wheat is subject. It affects the grains only. These become somewhat enlarged and filled with blackish, offensive-smelling spores which, when present to a large extent in flour, ruin it for food. There are two well-known methods of treatment, the hot water and the formalin. The latter is the easier to apply and consists in sprinkling the seed with formalin solution, made by mixing one pint, or pound, of formalin with forty gallons of water. If preferred, the seed may be immersed in this solution about thirty minutes, then withdrawn and allowed to stand for two hours and finally spread to dry upon a sterile surface. Care should be exercised in handling treated seed. The drill and all other implements used in connection with it should be sprinkled with the formalin solution.

The Adventures of Sir Hubert, Knight of the Orchards

By N. T. Frame

AFTER the adventure at the cooper-shop, where Sir Hubert's gallant interference in behalf of a better package for the fruit of his beloved trees had, unbeknown to him, resulted in the acceptance by Mr. Practical Grower of the cheap barrels at a cheap price, Sir Hubert had proceeded on his journey, innocently rejoicing.

The atmosphere being conducive to drowsiness and Sir Hubert having, as it were, his head in the clouds, he did not notice when his horse took the turn which would bring him home by way of the farm of Mr. Practical Grower.

Sir Hubert was, therefore, a bit surprised upon discovering in the road ahead a wagon bearing a rack loaded with barrels. On coming nearer he was further surprised and angered to recognize the team of Mr. Practical Grower. He knew at once that the barrels must be the very ones he had so recently condemned. In his anger he gave spurs to his mount as though to tilt at full speed against the load of barrels.

The team drawing the wagon evidently considered discretion the better part of valor and bolted into the ditch. The wagon went over and the barrels were scattered along the roadside and even into the field beyond.

Naturally enough Mr. Practical Grower was not pleased with this sudden turn of affairs. Ignoring his team, which, having caused the trouble, now stood complacently waiting for their master to remedy it, he made for Sir Hubert, whip in hand. Our knight would probably have accepted this challenge to personal combat, but his steed was more wise and proceeded to get away from the approaching lash.

After Mr. Practical Grower had gotten his wagon back onto the road and was gathering up the barrels, Sir Hubert persuaded his horse to return that he might learn why the cheap barrels had been accepted.

"I just figured this way," replied Mr. Practical Grower, whose ire had now sub-

sided, "Mr. Slick Buyer, who takes all of our apples each year, offers no more in good barrels than in poor ones. So long as there is no competitive bidding from other buyers, why spend our money for extra sorting and packing?"

For a minute Sir Hubert made no reply. Meantime, an idea gathering force in his mind, his head was again lifted to the clouds. Forgetting to help in reloading the barrels, but, as it were, scenting a far-away battle-field, he exclaimed, "We shall have competition from other buyers," and proceeded homeward at full speed.

And then began, with great zest, the gallant, if bloodless, Battle With the Postage - Stamps Against Mr. Slick Buyer. Sir Hubert directed the campaign. His two sisters loaded and fired the weapons.

Two letters, each containing five cents in stamps, were mailed to New York City for copies of "The Packer" and "The Produce Reporter." The secretary of the National Apple Shippers' Association, Martinsburg, West Virginia, was requested to send a membership list of that organization, as was also the manager of the National League of Commission Merchants, Buffalo, New York.

These letters mailed, the telephone was kept busy calling farmers, coopers, merchants and every one who could give any accurate estimate of the number of barrels of apples likely to be for sale in the nearby region, with varieties and qualities. All were likewise asked to furnish addresses

of former buyers or of wholesale-produce men and grocers or other dealers or large consumers who might possibly become buyers. The telephone manager promised to furnish the classified telephone directories used in the three largest cities near them.

By the time all of this information had been sifted and from it a list of several hundred possible buyers had been made, nicely-printed crop reports had been secured from the local printer. These gave interesting facts about the apple industry, together with the estimate of fruit and quality of product for sale to cash buyers who might care to visit the community.

These reports were at once "fired out" to the list of prospective buyers as fast as envelopes could be addressed and stamped. The cost was something—possibly as much as twenty-five dollars, all told. But what cared a loyal knight like Sir Hubert about cost, when the matter of securing right

and justice for his trees was at stake?

In due time replies came from Mr. Willing Buyer and from some of his associates; and a letter was even received from that mythical character, Mr. Ultimate Consumer, signed, however, by his wife. Finally, after some correspondence, Mr. Willing Buyer presented himself for a personal inspection of what was offered.

Meanwhile, however, Mr. Slick Buyer had also been busy. He had visited Mr. Practical Grower and evidently made clear to him that throughout the country would

be such a tremendous apple crop as would make the prices everywhere low. But because of past relations he would give a larger price than he could afford to pay others—if the deal could be closed at once. Mr. Practical Grower appreciated this show of friendship and told him so and the deal was closed.

When Mr. Willing Buyer had looked at the various orchards and examined the fruit, he preferred the apples of Mr. Practical Grower because of their superior quality. To the mortification of Mr. Practical Grower and to the loudly-expressed disgust of Sir Hubert, Mr. Slick Buyer resold them to Mr. Willing Buyer at a profit of forty cents per barrel without ever touching the apples.

The lack of coöperation from Mr. Practical Grower had evidently brought defeat to Sir Hubert, in spite of the battle with the postage-stamps. But not so to his sisters. Even when addressing envelopes, they talked, between themselves, about the hundred or more barrels of good apples they knew were in the barnyard orchard. When from Mr. Willing Buyer they had obtained a price about fifty cents per barrel better than that offered by Mr. Slick Buyer, they were satisfied with their part in the battle.

Sir Hubert, when he heard of this sale, took much pride to himself, that he had been able to combine loyalty to his ideals with business judgment, whereby for each dollar spent two dollars had come back.

Hedge-Fence Policy

WHEN it is desired to give a hedge-fence an effectual "set back," arrange the early thinning so that the cutting back can be done in August. This looks good, but two or three years of this policy will cause the hedge to bud later in the spring and to begin to die. If it is desired to kill a hedge, cut it down early in the dry season; consequently, to preserve one, the opposite practice should be followed.

GEORGE P. WILLIAMS.



"He made for Sir Hubert, whip in hand"

What Fruit-Growers are Doing

Organize—Then Deal Squarely

IHAVE in mind a man who has made a specialty of growing strawberries. He succeeded in his venture until he trusted some large shipments to unscrupulous dealers in a distant city. His losses forced him to sell out and go to a newer portion of the country.

There this strawberry culturist enlisted some of his neighbors in strawberry-raising, and eventually they formed an association for the protection of its members in a business way. The experienced grower was made salesman for the association. The first load was taken readily by the dealers in the near-by market at a good price. When the salesman appeared with the next load, he found that the dealers had arranged among themselves to fix the price for the berries at a dollar a crate lower than they had paid for the first load. Instead of acceding to their demands, he peddled out his load of berries to consumers at a good profit over the price realized for the first load.

After that the dealers tried two schemes to get ahead of him. One was to bring in from a distance berries that they could sell lower, which did not work well, for the berries were mussy and inferior, and consumers preferred the fresh supply from the strawberry-man.

The next scheme was to go to the neighbors of the strawberry-man and try to buy their crops. It was very soon discovered that the growers were up to the tricks of the trade, had organized and all the berries they could raise were sold by the one salesman. The only way the dealers could get a hand in the sale of the berries was to pay the price fixed by the growers' association, which, at last, they did.

In this case all the fruit sold by the association was graded, the first-class berries were put in boxes and crates marked "table berries," the smaller berries were put in separate packages marked "canning berries" and were sold somewhat cheaper. It was soon discovered that the name of the association on the crates was a guarantee that all the berries in the packages were of the class represented.

Prices were maintained and both growers and consumers were perfectly satisfied.

Another case I have knowledge of is that of a young Michigan man who has a love for the apple business. Since insect pests have been so prevalent, he has been persevering in spraying, and he has succeeded in securing fruit from his orchards equal to the best in the state.

He has adopted the plan of thinning the fruit on the trees. The fruit is practically sorted before it is picked. When picked it is carefully graded, only the standard, perfect apples are put in the packages marked number one. By the process of sorting rigidly and selling only the best as first class, a trade has been worked up among Detroit consumers that is very profitable. His name on the packages is a guarantee that all the fruit in the package is alike and of one class. Such methods not only bring better returns to individuals, but stimulate an actual increase in the consumption of fruit and thus benefit all the growers.

N. A. CLAPP.

Make No. 2 Fruit into No. 1

ACONVENIENTLY-ARRANGED evaporator—home-made ones often do just as good work as any that can be bought—might well have a place in every fruit-farm. The building over it can be made of any material available, so long as it is rain-tight.

From my experience I believe if there was a small evaporator-house on every farm, a great deal of fruit that now rots could be turned into money. Aside from the money loss, it is not best to allow waste fruit to lie on the ground rotting and making a breeding-bed for all kinds of disease germs. There can usually be found a good market for good dried fruit and, not being perishable, it can be sold advantageously and at convenience.

A great amount of the fruit that is now shipped as No. 2 stuff could be dried and taken out of the green-fruit market and thus the No. 1 fruit would be benefited. Too often the price is not satisfactory for No. 2 stuff when shipped green, but when it is properly dried it can be held and

is in a condition to bring a good price.

My own drying-building will handle seventy-five to one hundred bushels of green fruit at each filling. It is fifteen feet wide outside and thirty feet long. It may be set with the window any way that is desired, but either east or south is to be preferred. My dry-house runs north and south the long way, with a door in the north end and a hallway running the entire length of the building four feet wide, thus giving plenty of room for the attendant to work in. I also have a large door in the center of the house in the south end even with the hallway, with a large window beside it.

The stove-room in the south end is ten feet square, leaving room on the east side of same for a row of trays. The flue is placed in the center of the building and the stovepipe elbowed to reach it, thus saving heat which would rapidly go up through the flue were it straight from the stove. Ten feet from the north end of the building is placed a ventilator reaching down through the ceiling to let moist air from the fruit escape as is necessary. The south window can be raised at the bottom or lowered at the top to cause a current of air; better to raise it at the bottom, as hot air rises and thus the hot air is caused to flow through the building and can be adjusted so that it will escape as fast as desired. In this way fresh, warm air can be supplied at all times.

The trays in this building are made of half-inch-by-one-inch strips and are two by two and one half feet square. They may be any size desired, but for a building like this two and one half feet square is convenient and gives two sets for each side.

The house can be built any height desired. There must be a little space left between each of the shelves for the hot air to circulate through to dry the fruit. The shelves can be so constructed that they can be taken out when the drying season is over and, if the house is properly built, it can be used for sweet potatoes, for instance, during the winter.

R. B. RUSHING.

Nursery Graft

THE necessity of exercising extreme care in buying nursery stock was forcibly brought home to me this spring. I was visiting with a young fruit-grower friend of mine, and he showed me a four-acre patch of raspberries and a still larger one of strawberries. Both were old and badly run down, suckers and runners fairly choking the fields. It was clearly a case for the firebrand and the plow. Imagine my astonishment when my friend told me he had been approached by the representative of a well-known nursery company, one which I had always considered reliable, with an offer of so much per thousand for all plants there. Not only was it very weak stock for planting, but how the company was going to guarantee the plants true to variety was beyond me, for there was a mixture of early and late in beautiful confusion. Truly, the ways of some business houses are beyond comparison.

WILLIAM A. FREEHOFF.

Bees, Trees and Hens

The fruit-tree will feed our bees and brood our chickens during the hot summer weather and pay us for the privilege.

Plum and cherry trees are especially adapted to the poultry-yard and are greatly benefited by the presence of fowls about their roots.

Many a fruit-grower neglects to cultivate his trees, because he is afraid of injuring the root systems. Just spade up the soil under the trees and the poultry will do the cultivating and fertilizing, without injuring any roots.

Bees, trees and hens form a profitable combination and each branch in its fullest and most profitable development is dependent upon the other. Together they offer an ideal occupation for the person who enjoys country life, but who is not rugged enough to conduct a more extensive system of agriculture.

W. MILTON KELLY.

Gardening---By T. Greiner

From Dry to Wet

THE dry spell has been followed by one unusually wet for this season of the year. The last rain we had was tremendous and has given the ground a real soaking. Now plants grow, and grow fast. So do the weeds. In some places, where the surface has already become somewhat dry, I have again gone through the rows with the cultivator, restoring the soil mulch. It is comparatively easy to keep the weeds down in dry weather. The least stirring of the soil with cultivator or hoe will do it. But we should always keep it up so as to be prepared for the rain that may come any minute. If a patch is neglected and a rainy spell should set in, we may be in a bad fix. Weeds that have already a good start will get so firmly rooted that the horse hoe, even when equipped with coarse teeth, may be unable to pull them out. In some cases, if rains continue to come and give us no chance for stirring the surface of the soil, the weeds take entire possession of the patch beyond the possibility of redemption. Keep up with your work always!

Early Celery

On July 26th I put the first boards on my earliest celery, which happens to be Chicago Giant grown from old seed. The boards are a foot wide, and the double row of plants already shows from six to

crust and bake as usual. The chances are that you will like the pie and will want more of it. Many more members of the same genus of plants (Solanum) may be used for pies, even the common potato and the tomato, green or ripe. Green tomatoes, with proper seasoning, make a good substitute for mince-meat, and this is more to some people's taste than the mince-meat made in the regular way of hearts, tongues and various other parts of hogs or beef-cattle. The garden huckleberry, wonderberry and wild nightshade (all three practically the same thing) may be used for pies if you are not afraid of their slightly toxic properties. With proper seasoning of lemon and other flavors you can make a delicious pie of them. But give me the regular huckleberry in place of these, if you please! Of course, the pumpkin-pie is the king of pies, especially during the holiday season. And for change and variation we like a sweet potato and a squash pie. But much depends on the kind of pumpkin you have, for there are pumpkins and pumpkins, as there are squashes and squashes, some very good, some very poor. I have for some years raised a smallish "sweet potato" or pie pumpkin and I carefully gather seed from some fine specimens every year. While our winter squashes are practically a failure this year, there will be plenty of good pumpkins. At least that is the prospect. It will mean a good

What We Spray With

I am asked about the ready-made Bordeaux mixtures on the market. They can be used with arsenate of lead and be useful in their way. But we can make our own cheaper and more effective. Why use ready-made? Freshness counts. For earlier application use four pounds of copper sulphate and five or six pounds of fresh stone lime to fifty gallons of water; for later spraying three pounds of copper sulphate and four pounds of lime to fifty gallons of water will do. In either case add three pounds of arsenate of lead to that quantity of mixture.

It is not advisable to rely on dust sprays. The liquid sprays are more effective and generally safer, because the poison is more evenly distributed; hence the entire leaf surface is protected.

Save Your Cabbages

The green worm will get your cabbages if you don't watch out. You see the white butterflies flitting about from plant to plant industriously depositing eggs, an egg here and an egg there. First you know your cabbage-heads are riddled, befouled and almost worthless. Fortunately cabbages can stand many things that the worms can not. You can throw a small handful of slaked lime into the heart of the plant, all the better if a little insect-powder is thoroughly mixed with the lime. Or you can use ashes and salt in the same way. You may dash some pretty hot soap-suds over the heads or apply this in a forcible spray or strong tobacco-tea, etc. All these things kill the worms and free the heads also from other pests, such as lice, slugs, etc. But prompt action alone will save the cabbages!

Rhubarb and Strawberries in Fall

You should not be without a few plants of rhubarb, nor a bed of strawberries. You can get some rhubarb plants or sets in your vicinity somewhere, often as a gift or at least at small cost. You have some spot somewhere in the back yard, at one end of the garden, etc., to set them. Make the ground very rich. You can get some old compost or hen-manure or ashes or all of these. Use them freely, mixing them well and deeply with the soil. Plant the sets, each one having one good eye at least. This can be done any time this fall. Do it. Very likely you will grow stalks half as big as your wrist, two feet tall, tender and brittle, and have all you may want for sauces and pies. If you have now no strawberry-patch, try also a few dozen potted plants. Get them from a professional plant-grower, the sooner, the better. Plant them in well-prepared and well-manured ground, a foot apart in the row. Give them close attention with the hoe until winter, then cover them with a mulch of coarse litter, and very likely you will get some very large and very fine berries next year. Try the Marshall in this way. It does well in hills and will make very large plants. But delay is dangerous.

What Seeds to Sow Now

Try a pinch of Big Boston lettuce. Perhaps you may get some plants fit to use before winter or at least some plants that you can plant out in frames or the greenhouse a month later, and have lettuce for Thanksgiving and Christmas. Sow a few rows of spinach for early spring greens. Perhaps we can have dandelion in spring earlier and easier, but for really delightful and most wholesome greens, what could beat spinach? Let it have a good growth before winter, then cover lightly with any kind of litter and you will have good spinach in early spring all right. Sow a little patch of rape and perhaps rye near your chicken-yard for pasture in open days during December and in early spring.

The Department-Store Seeds

The results of my trial with department-store seeds were meager indeed. It is only nine cents that I spent for the dozen packages of seeds, but it is nine cents wasted. One variety of peas gave not a single plant, another three plants and the third (labeled "Earliest and Best") gave a fairly good stand, and we shall have at least a couple of dozen pods of peas on them. Then there is a little row of carrots as the proceeds of a package of Short Horn carrot, and no fault to find with it when one only wants a row six or eight feet long. But not a plant from any of the other packets!

I sowed these seeds just for a trial, but with all the care and under as favorable conditions as seeds generally enjoy. I expected little and got less than I expected. Why fool with such seeds, anyway? I depend on the seedsman who knows his business for my seeds and feel safe.



A Farm and Fireside Subscriber Gathers a Big Tomato Crop
Photo taken on farm of H. F. Marsh, near Antigo, Wisconsin

eight inches above the boards. This means that the plants are now about eighteen inches high, which is certainly "going some" for celery at end of July. In a couple of weeks we should have blanched celery on the table or for sale. At the same time I am hilling a portion of this earliest celery up by plowing a furrow or two to the rows from each side, and following this up by drawing more soil to the plants with the hoe. Whether this plan will work thus early in the season and give us as good celery as we used to get in September, remains to be seen. Whether Chicago Giant will blanch as well as White Plume and get to be real nice and brittle under boards as under earth banking is another question. I have some White Plume and some Golden Self-Blanching to compare with it. There are always things yet to be learned in the culture of vegetables. But surely the celery crop at this time looks remarkably promising. A few of the Giant Chicago plants "bolted"—that is, went to seed—so they had to be pulled up. Whether this is due to the early planting or to the fact that the plants were grown from old seed is another question I can not answer at this time. But, as I have a chance to compare the growth and development of plants grown from old seed and of some grown from new seed, I hope to find out something more about it.

Vegetables Good for Pies

I have spoken of the Strawberry, or Ground-Cherry, Tomato (alkekenzie) as suitable for pie-material. The ripe fruit is quite attractive in appearance, with glossy, translucent skin. It has a sweetish flavor, sickish perhaps to some tastes, but, if properly prepared, it is really delicious. A reader asks for a recipe to make a good ground-cherry tomato pie. It is easy. Remove the husk from the fruit and wash the latter. Fill the pie-crust in the usual way with the raw fruit, adding sugar and the juice of one lemon, then put on the top

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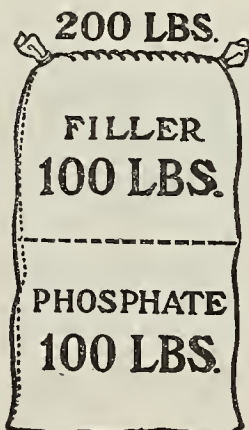
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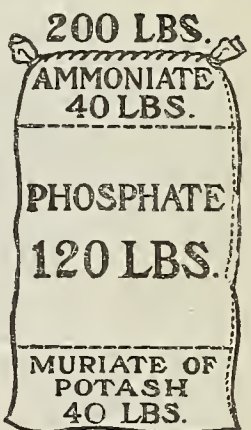
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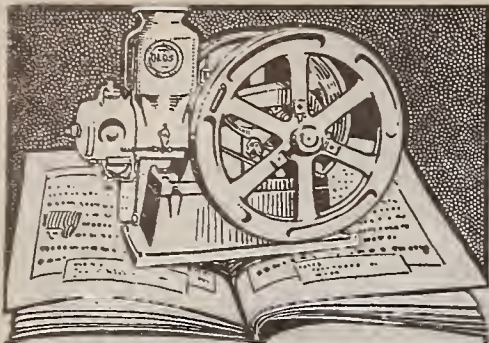
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Practical Poultry-Raising

Combination of Biddy and Brooder

IN MARCH of the past season I had an incubator hatch of seventy-five fine, healthy chicks the same day that a large fine Rhode Island Red hen hatched a brood of ten chicks.

It occurred to me that I could make this hen relieve me of the care of raising these chicks entirely by artificial methods. I have a large brooder coop that I placed under shelter and inside of the coop placed a seventy-five capacity fireless brooder. While the babies were little they were confined in the coop, with the hen to scratch for them during the day and hover any that might be chilled—different ones being hovered when so inclined. At night sixty-five were placed in the fireless brooder, the rest left with the hen, different ones being left with the hen different times, so that all were accustomed to the hen and to the brooder.

Not many hens would have mothered so many chicks, but I was fortunate in this particular hen and she not only did the best she could for the babies while they were little, but when she weaned them after two months there were seventy-five, healthy chicks to her credit and the labor on my part was cut down by half.

I have seen this experiment tried with a capon to hover the chicks and it has proved very satisfactory, but I had never tried a hen or seen any one try a hen in raising such a large number of chicks at one time.

I have marked the hen and next fall when my winter hatches come off shall use her again in the same way.

Mrs. J. B. ROGERSON.

Rotation in Hens

UNDER ordinary farm conditions I believe it is best to keep over both yearling hens and pullets in the proportion of half and half.

As a breeder I consider a yearling hen superior to a pullet, as the eggs are usually larger and will produce larger and better developed chicks. In fact, the vigor of the offspring is not decreased if the hen is kept for three or four years, providing that she is mated with good, vigorous males. Considered as a breeder alone her value does not depreciate as long as she produces good chicks. But we must judge her value also by the total amount of her egg output and we know that the older she grows, the fewer eggs we may reasonably expect. Experiment station results and practical experience go to show that it seldom pays to keep hens after they are two years old, except for breeding uses.

Notwithstanding the fact that pullets will lay more eggs than yearling hens, I believe it pays to keep as many yearlings in the flock as pullets. Many who keep a farm flock do not consider the cost of raising the pullets to an egg-producing age while the yearlings are making a profit for them. Keeping about the same number of yearlings and pullets enables me to market about one half of the flock—the older birds—during the summer when they are in good condition and will bring the highest price. In this way I have plenty of room for my young pullets early in the fall and get them into their houses

and ready to begin laying before cold weather comes.

By planning my egg-producing flock in this way I am able to supply regular customers and maintain a fairly uniform egg production during the whole of the year. After the older birds are marketed the yearlings alone must be depended upon to supply eggs for customers until the pullets begin to lay in the fall. I have found it very unsatisfactory to depend upon pullets alone to maintain a uniform production throughout the year. Then again, if an incubator is not used for hatching, it is imperative that we keep over a few yearling hens if we are to secure early hatches to supply the increase to the flock.

W. MILTON KELLY.

Rented Hens

E. A. ATWOOD, a hotel-keeper in St. Charles, Illinois, has made an interesting contract with a Kane County farmer to feed and care for his chickens on shares. The farmer made the proposition. He is to care for all the pullets produced by the hotel-man who is to take all of the eggs the year around at thirty-five cents a dozen, the chickens to remain the property of the hotel-man. The farmer furnishes all the feed. Atwood expects to be reimbursed by selling the eggs for settings at a higher rate.

Mr. Atwood has had an odd experience in raising chickens in connection with his hotel business. Last year he selected the Orpington as his favorite fowl, purchasing seven settings, from which he got seventy good chicks, using a natural mother. Two hens given thirty eggs between them brought out twenty-



"All Had White Legs"

five chicks, twenty-four of which were raised. This year, Atwood set nearly a thousand eggs and got less than one hundred chicks. They hatched out all right, but died after they had become well advanced, rats taking a large number.

The hotel-man proposes to keep on hatching under his own supervision, but proposes to send the chickens to the farms where they will have plenty of room and not be cooped up in close quarters.

Since he began he has succeeded in producing some fine fowls. They are the Buff Orpingtons, and of the entire flock so far produced, but a single fowl came out of the shell with yellow legs, all of the others being white.

J. L. GRAFF.

A New Gape Cure

A FEW issues back I noticed an article recommending the use of three horse-hairs, dipped in turpentine, to be thrust down the chick's throat as a gape-worm extractor. That strikes me as a pretty brutal system; besides, I have a method that is not only more certain, but about a quarter as much trouble.

Take corn-meal, enough for a good feed for all the gaping chicks on hand. Mix the dry meal with one fourth as much black pepper, then add boiling water and stir—don't get the mixture too soft. When it is cool enough, feed the chicks all they will eat. One dose is enough if given in time; two doses will cure, anyway. You don't have to waste time attending to each chick. I have not lost a chick with gapes since taking up this cure.

I used to treat gapes with a feather dipped in turpentine run down the chick's throat, and never saved one of them. One day when I was seasoning some potatoes the lid came off the pepper-box. The potatoes were too peppery for the table, so I fed them to about twenty chicks that had gapes badly—I thought it couldn't make them any worse off. When I went to feed them again there was no gaping and I raised all but two that a rat caught.

Since then I have fed pepper not simply in bad cases, but with the regular rations. When the little chicks first begin to eat, I cut cooked potatoes fine, season quite black with pepper and feed this twice a

week until they get well feathered and there is no more real danger from gapes. I have cured hard cases, too. A neighbor gave us fifteen chicks nearly dead with gapes. I gave them the pepper-and-corn-meal mixture, kept them warm all day near the stove, then put them under two hens that had chicks the same age. Next morning they were lively as could be and we raised all but one. Mrs. C. L. P.

We do not feel so strongly as our correspondent does about the cruelty of the horse-hair method; everything in the nature of surgery has to be more or less cruel. But there is no denying that it is a mean treatment from the standpoint both of chick and operator. It is slow, and almost impossible to apply to the smallest chicks, which are often the gapiest. Any good substitute should be welcome. Our correspondent informs us she has tested the above system thoroughly and we believe it will be worth our readers' while to try it. EDITOR.

Special Poultry-Foods

WHEN crowding young stock I have used cracker-waste or bakers' crumbs, mixed with other food and moistened with milk, to advantage.

One will often find it necessary in crowding exhibition stock up to the standard weights to use black molasses, sorghum or brown sugar. When such materials are used in cases of this kind, the other food must be carefully regulated or the birds will "go stale," as fanciers term it. However, this food would not prove advantageous from a practical standpoint.

One can use oil-meal for the molting hens, and will find it a great feather-casting stimulant and will come to look on it as a necessity during the molting period. I use it in proportion of one spoonful to each fowl three times a week. SYLVANUS VAN AKEN.

There's Sense in the Systems

IN A recent issue I read an article by Fred Grundy on the Philo and Corning systems of poultry-raising, both of which he seems to discredit quite severely. It seems to me that Mr. Grundy is living in a glass house. He is himself the author of a book on poultry, which I have read through, without finding very much that was original in it. On the other hand I have read the Philo book and followed many of its suggestions with splendid success. We had two-pound broilers at eight weeks and we never before had chicks develop so rapidly and be so free from diarrhea and other chick troubles. The Philo man may claim too much for his system, but as far as we have adopted his suggestions we have profited many times the cost of the book. I don't think any one will claim that Mr. Philo and the Cornings have not done what they say they have done at their own plants. Even if only one man in a thousand can do the same, they have shown what can be done by adopting their systems. Evidently, then, it is up to the man behind the chickens. And even if only one man in a thousand does as well as they, there will be a lot of fellows who will make a great improvement in their poultry business by adopting suggestions from their books.

I am not a booster for Philo or Corning or any one else, but it is always an inspiration to study the methods of successful men in any walk of life. S. H. P.

Hens too Fat?

A LADY lover of poultry asks what causes her hens to lay soft-shelled eggs and lose their feathers on the back and body behind the legs. She feeds clover-hay, mash morning and noon, with corn morning and evening. She has grit handy and gives meat-scrap liberally two or three times a week. No vermin.

It seems to me from the feed that these hens must be pretty fat. Is not that the case? Corn in summer is pretty heavy food. I think I would drop that out and use, instead, some wheat or oats. Corn is good in cold weather when the hens can use food to produce more heat than they need in summer.

Hens that are too fat often lay soft-shelled eggs. In addition to the grit you might try giving a little air-slaked lime. Put it where the hens cannot get it on their feet when they are wet from dew or rain, or it will cause sore toes.

Loss of feathers may also come from being too fleshy. We have had hens that pulled their own feathers off when over-fat. It seems as if they feel too warm and take that way of getting off some of their clothes. E. L. VINCENT.

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Live Stock and Dairy

Feeding Range Lambs

ONE great advantage of feeding range lambs is the fact that the home-grown forage and fodders, together with many otherwise waste products of the farm, may be turned to profit. This may all be done with the minimum expense for the purchase of the highly concentrated grain and by-product foods that are required to produce satisfactory results in feeding other kinds of live stock.

Feeding range lambs, like the other branches of sheep feeding, is sure to become very popular as our farmers appreciate the necessity of cutting out the purchase of large amounts of grain-food and feeding a class of live stock that are capable of turning their home-grown crops to profit. Many farmers in the middle West and Eastern states find very good profit in feeding these range lambs which are purchased in the markets as unfinished material and by feeding them on their farms prepare them for the winter market.

In England this branch of feeding has for many years been found a very profitable way to increase the fertility of the soils as well as a way to get maximum value out of grain, forage and root crops. Some English feeders even import lambs, buy our corn, oil-meals and even hay and make substantial profits. Is it not fully practicable and possible for the farmers of this country to conduct the same line of feeding three thousand to four thousand miles nearer the base of supply? The question answers itself. Few branches of live-stock feeding offer better inducements than feeding range lambs.

In this, as in any other branch of live-stock feeding, there are certain funda-

that they may utilize their home-grown forage, also so that the lambs will start to gain before the period of full feeding begins. When good feeders are purchased early it is often possible to secure a gain of from eight to twelve pounds per head during the fall at a very light expense and the lambs are in a much better condition to put onto full rations than those purchased later and put onto a full ration of grain feed at once.

Rape, barley and peas and rye will afford excellent grazing and, together with the odds and ends of corn-fodder, second-crop hay and a very small amount of grain foods will furnish an ideal combination of foods to get the lambs well started on the road to profitable gains.

Lambs, to be finished for market, should go into winter feeding-quarters before the weather becomes cold and unsettled. What they will glean from the fields after the first hard freezing weather will hardly offset the losses from exposure and dampness. Good, tight sheds open toward the south are the best shelter for lambs that are being conditioned for market.

During the full feeding period they will thrive better if fed in bunches of thirty to fifty in a yard and shed, or the pens may be subdivided by their food-racks instead of board partitions, thus making a saving of room and also of expense. The yards and sleeping-quarters must be kept dry and clean, as impure air and dampness are two things that a sheep can not endure.

The feeding-troughs for grain should be fastened to the feed-racks. Many men use self-feeders for their grain foods, but, unless one looks after these self-feeders carefully and keeps them perfectly clean,

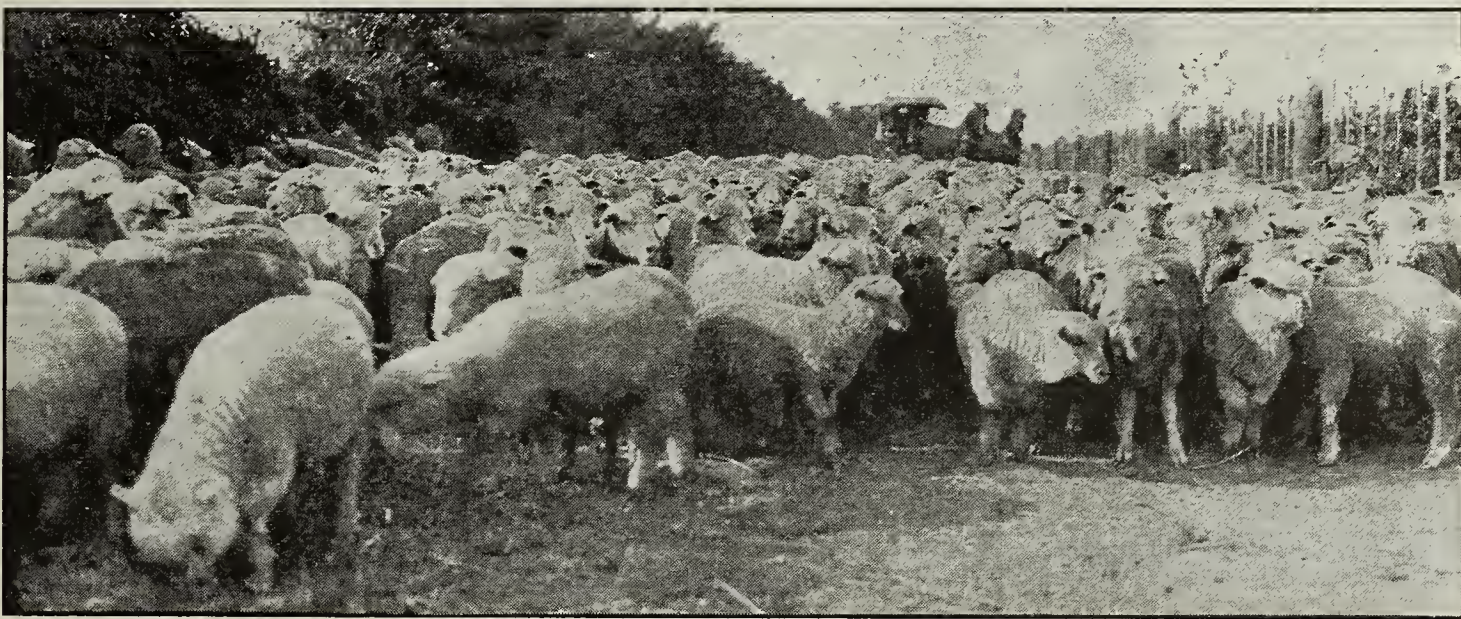
finished. It does not usually pay to feed for too early a market, for good lambs will sell better when they are carried well into the winter. By that time the cull fall trash is off the market and good mutton is commanding a fair price. In marketing, sort the lambs and put them in uniform bunches, and if some fail to reach the desired condition, keep them until they are properly conditioned, or else sell them to local butchers. Shipping them with the ones that are well fattened will knock more money off the sale of the whole lot than the few poorly-conditioned lambs will bring. It pays to grade any kind of live stock before shipping to market.

W. MILTON KELLY.

Circumventing the Hogs

ONE of the real secrets of success in the growing of profits out of live stock is the manner in which the animals are handled and cared for by their owner. An animal may consume just as much feed and yet not convert a large portion of it to the real profit of the owner if it be roughly handled, dogged and hunted about from nook to corner. While the hog will stand for much of this abuse in handling and still be considered upon friendly terms with its owner, yet we can never figure quite where the profit is in a bunch of hogs, and especially fattening hogs, that will "boof" and make away the moment the owner appears.

Tolling of the animals instead of driving them is the long suit of the successful swine-grower, and all swine are a half easier controlled, at selling-time or before, if tolling be the only method they know about. In order to have complete suc-



Driving Home a Flock of Strangers From the West

mental principles that must be carefully considered before entering upon the business. First, a man must have good, comfortable buildings and yards to afford proper shelter and exercise. Second, he must have the ability to select good feeders and be a close student of markets. Third, he must plan to grow—not buy—as large a portion of the food consumed as possible. Fourth, he must plan to utilize all waste fodder, forage and grain, the value of which would otherwise be lost. Lastly and chiefly, he must have the good judgment, as well as the practical knowledge of sheep and their characteristics, that can only come through actual experience in caring for the flock.

The man who contemplates feeding range lambs must have good, dry yards and well-ventilated sheds that afford protection from dampness and extreme cold weather. He needs a farm that will grow crops of clover or alfalfa, corn, oats and other small grains and an abundance of fall pasture. He will need to have an abundant supply of succulent forage for fall feeding, for this is an important factor in getting the lambs well started before the full feeding period arrives.

If possible, the sheds and feeding-yards should be arranged so that the lambs may be divided into bunches of from thirty to fifty, according to their age, size and condition, thus enabling the owner to obtain more uniform results in feeding and come nearer to supplying their individual requirements. Lambs in uniform bunches will look better, feed better and make more profitable gains than when they are all allowed the run of the whole shed and yards.

The most successful sheepmen in the middle West make it their practice to buy good feeders early in the fall in order

they are a nuisance and a means of spreading disease among the flock. I know many sheepmen who have given them a fair and impartial trial and have discarded them.

Sheep that are being conditioned must have some form of succulent food and for this purpose root crops are unexcelled. The expense of growing and the additional labor they require, however, make root crops unprofitable for many farmers. Good silage from matured corn is an excellent substitute and can be produced more easily and for less cost per ton.

Wheat-bran, oats, corn, barley and linseed-meal make an excellent variety of grain foods for fattening lambs and the mixture may be governed somewhat by the relative market values of the various grains used and the amount of each produced on the farm. Two parts wheat-bran, one part oats, two parts corn and one part linseed-meal make a good ration and while it is not exactly balanced it will produce the results. About four pounds of corn-ensilage or roots a day is enough for each lamb, and the rough feed should consist of alfalfa, clover or mixed hay that is well cured and bright.

All of the rough feed that is not readily eaten should be taken out of the racks. Cleanliness in feeding is essential as sheep are fastidious regarding their food, while at the same time they will eat more kinds of grains and fodders than any other farm animal. About a pound and a half of grain divided into two feeds is about the best grain ration for economical gains. Under such feeding lambs can be made to gain from eight to twelve pounds a month all the time that they are on full rations.

There is a fine chance to better one's profits by the use of judgment in the marketing of the lambs when they are

cess without driving and pounding the animals about, it pays several days previous to marketing to allow the animals the run of the loading-chute in such a manner that they can go to the top of it. An armload of straw or litter thrown upon the chute floor will invite their curiosity, and when loading-time comes, they will be into your rack almost before you have the wagon in position.

Did you know that a hog will almost forget he is living if he sees an ear of corn in front of him? We have successfully brought a bunch of swine across some run bridge or other difficult place in the roadway, by tying a long piece of binder-twine to two or three ears of corn and, going some distance ahead, dragging the corn across the bridge. Some venturesome animal will start after the corn and first thing we know the whole lot are following.

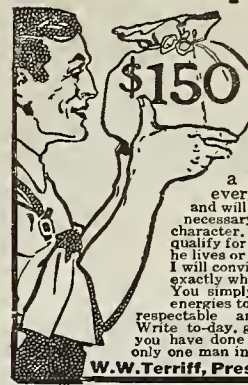
We often handle our sows and pigs in this manner in changing them from one quarter to another. Our chief method in handling single animals is upon a small sled with one horse and a hog-crate. There is no driving or running, no coaxing, except to toll the animal into the crate.

We should never attempt to drive an animal along the highway if in any way possible we could get him into a crate. The disagreeable labor, not to mention strain on our nerves, is ended when the animal is crated and we can take him just where we desire.

Swine are the easiest of farm stock to train and handle, and the quiet manner in which they are conveyed by tolling surely enhances not only their value upon the farm, but increases as well the checks they leave with us upon their departure.

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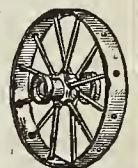
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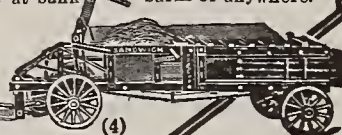
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Live Stock and Dairy

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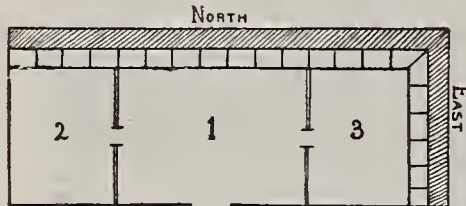
In this article and the two to follow it Mr. Ross opens up in detail a most important phase of his subject—the winter lamb specialty, which was reviewed in general by him July 25th. Farmers who have overlooked the possibilities of this business have been overlooking dollars. Mr. Ross' next two articles will be worth watching for. EDITOR.

SHEEP are by nature a hardy race; severe cold or great heat fail to cause them any serious inconvenience, but they can not without detriment be exposed to very heavy and continuous rains, especially on land that is not thoroughly drained. Lambing-time is the critical period in this respect, and the careful shepherd will see, as that time approaches, that ample provision is made in the way of shelter for his flock.

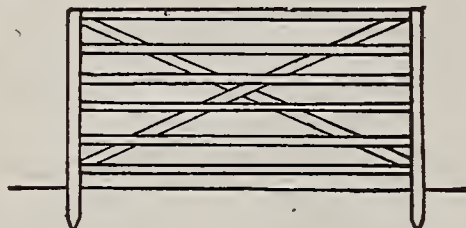
Long experience and a most changeable climate have made English and Scotch shepherds experts in providing simple and inexpensive shelter fairly proof against cold winds, rain and snow; and I will try to explain some of their simplest yet most effective methods.

And first as to the provision to be made for the ewes during lambing, and the three or four following months during which they are attending to their maternal duties. The ideal place to locate their yard is a good, dry pasture of from six to ten acres near to the homestead. If, as is often the case, a good shelter shed is already there, it will form a part, at least, of the side of the yard by which the coldest winds are apt to enter. We will, however, suppose that this does not exist and a substitute has to be provided.

A yard twenty-five to thirty yards long by fifteen wide will suffice for one hun-



dred and fifty to two hundred ewes with their lambs. No. 1 in the accompanying sketch is the main yard in which the ewes are first kept as signs of approaching lambing begin to appear. The small pens—about six feet deep by three wide—are for ewes in any trouble, difficult parturition or other signs of distress, or for those disinclined to suckle their lambs or those which have lost a lamb and require to be milked by hand until a twin lamb or an orphan of some other ewe can be introduced or for those with twins. It is often well to keep such in these little homes for two or three days. The rear halves of these pens are, in English practice, roofed in with two hurdles laid one on the other with a good thick stuffing of straw between them, and wired or tied together.



The divisions are hurdles six feet long by three and one half or four feet high fastened to stakes well driven in; all the inside divisions are hurdles.

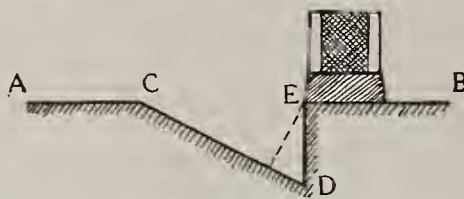
Yards 2 and 3 are to enable the shepherd to separate ewes with twins or those which have settled down comfortably with their lambs from those in yard 1, which

have yet to lamb, or for any other separations he may desire to make. He will soon learn to use these divisions to the best advantage of himself and his flock.

The walls of this yard can be made at more or less expense to suit your fancy or pocket; but I believe the simplest, as described below, is the most efficient as a shelter from storms, dogs or other enemies. They are formed of straw, packed closely, three or four feet wide or even more if material is plentiful, held together by tolerably wide-meshed wire netting, which will last for years, or by anything else that will keep the straw compact.

The Ha-Ha Fence

If, however, labor can be spared for the purpose, there is another good fence, common enough in England, though I have never met with it here. It is mostly used where a good, though invisible cattle fence is required, and is called a ha-ha—because that's what the farmer says when a stranger goes galloping over his field and suddenly meets with this obstruction. It lends itself to the defense of our sheep-yard most admirably and is easily made in slack times after harvest. It is simply a big ditch.



A-E-B is the surface level of the ground; C-D-E the ditch. This may be three and a half to four feet in depth, with a perpendicular side (D-E) next the yard—or that side may be slightly sloped, as shown by dotted line. The side C-D may be sloped to any angle, provided the distance from C to E is left too wide for any ordinary jump. The ditch may be sown with grass. The earth from the cutting is thrown up at E and spread to the width of the straw wall, for which it forms a fine foundation and lessens the amount of straw required to raise the wall to a proper height.

In making this the outside defense of the sheep-yard, a break of good width (to avoid danger from crowding) must be left for the gateway and fenced on both sides. The gates should be solid and of good height. No better defense from dogs or other disturbers of the peace of the ewes can be made at so small cost. Straw, stubble, corn-stalks or even bushes, so long as they are well packed together, will serve the purpose. This will be a permanent sheep-yard, provided that, after yarding-time is over, the yards are plowed up to a depth of six to eight inches and the soil, mixed with some lime, carted away and spread over any arable corner that needs manure. It must not be spread on pasture used by sheep. This is necessary, as next year's lambs might suffer from infection if any germs happened to be present. It makes an admirable manure for the garden which every farmer's family should take pride in cultivating.

If it happens that there is already a good shed in an available situation, it will form a part of the side of the yard from which storms may be expected and, as far as it extends, will take the place of wall and ditch.

When the ewes heavy with lamb are first brought in, overcrowding must be carefully avoided. It is safest at first to bring in the most forward of the ewes; the later lambers may be left in the field to be yarded only when it becomes necessary to watch them or to provide them with shelter from bad weather.

Troughs for grain rations and cut roots, which can be easily cleaned, will be best placed along the dividing fences in the yards; they should afford one and one half feet of space for each ewe. The ewes will be divided into lots at feeding-time. As masterful ewes are apt to get into the troughs, therein following the example of some monopolistic men among us, it is well to nail bits of lath across them at every two feet or so. Small box troughs must be provided for the separate pens. Water, rock-salt and sulphur must be handy.

Plenty of exercise is absolutely necessary for the ewes; they should be let out into the field for a couple of hours twice a day, where their forage allowance should be fed to them, scattered around or in racks which should be frequently moved about.

Punctuality in feeding-times should be strictly observed. It is a great help to the shepherd for the sheep soon learn when to look for their meals, and will not trouble the punctual man between meals;

but will surely call him when time is up. It also keeps them contented and free from fretting. Each gang will soon know when its turn comes. All left-over food must be carefully removed, or trouble is sure to follow with the ewes' milk.

The yards must be kept liberally littered with straw which should be removed to the cattle or hog yards to complete its conversion into manure, as soon as it becomes wet and soiled.

The arrangement of these yards is intended first to accommodate the mothers of the lambs born in November or early in December and fattened for the spring markets. The yards should, therefore, be ready by the first of November. There will be no difficulty in arranging for the later lambing, as there will be ample room for both lots. Of the treatment of these different classes I will talk in another paper. All this trouble will not frighten the man who sees his assured reward in the future.

JOHN PICKERING ROSS.

Some readers may not be familiar with hurdles—though their use is by no means confined to countries across the water. The appended diagram shows one—it is essentially a short section of movable fence that can be set up wherever desired by wiring it to other hurdles or simply by driving the sharpened end-pieces into the ground. Hurdles are handy for innumerable uses and are easily made of any light strong wood.

EDITOR.

The Scales Brought Surprises

WE HAVE been milking cows for nearly twenty years, fifteen years of this time with grade Shorthorn cows. The fact that they did not bring the returns they should led us to weigh and test the milk, then to the purchase of a pure-bred Holstein bull. We have been weighing and testing for three years, weighing every milking and testing a composite sample once a month, doing the work ourselves. We would not give up weighing and testing and stay in the dairy business.

We have found that the cows we thought would be the first to be sold are among the best cows we had. We did not think when we begun testing that we had a cow in the herd that would make three hundred pounds of butter in a year, but our records show that we have three out of the original herd of eleven that can do it.

The testing of the herd has led us to better feed and care for the cows, for when the milk is being weighed every day, any decrease in the milk-flow is noticed, and the cause is looked for. We have found, also, that there is a great difference in the length of the lactation period of the different cows; some will start out with a big flow of milk, but will be going dry in four or five months, while others will start with a fair flow and keep it up for a longer time.

We tested yellow-looking milk from a cow that was part Jersey that tested 3.9 per cent. and 4 per cent., while blue-looking milk from a Holstein tested 3.8 per cent. and 3.9 per cent.

If we are going to get a profitable dairy herd, we must raise the heifer-calves from the best cows, and how are we going to know which are the best cows unless we weigh and test the milk?

The lowest producing cow we had gave eighty-three pounds of butter-fat, the highest three hundred and fifty-four pounds.

G. L. MEIERDIRCKS.

You had better scour the feeding-pail than lose a calf from scours.

Few runty pigs ever are born, but when we see one in a pen with the larger hogs, you can count on it becoming more and more of a runt every day.

The barns for storing feed and sheltering stock in most farming communities have better and more attractive fences surrounding them than have the school-houses in which farmer boys and girls receive their scanty education.

How much has the raising of that calf cost you to date? What has the colt cost you? Compare the cost of these two animals; then compare the prices at which they would sell if placed on the market. We farmers need to keep more good brood mares.

Many pastures are full of crab-apples, and they are greatly relished by cows, although they assuredly decrease the milk-flow. They become large enough for the cows to eat about the time the fall pasture is the shortest, and the combined effect of these two conditions is liable to dry the animals up entirely.

Live Stock and Dairy

What is a Fair Milk Sample?

THE manner of sampling milk at creameries is of great importance to patrons furnishing the milk. Unless the sample is taken properly, the result of the test will be inaccurate and an injustice be done either to the one sending the milk or the other patrons. If the sample tests too high, the patron will be receiving more than his share, while if the sample is below his average milk, he will not receive what rightfully belongs to him. There is not so great a probability of error in making the test itself as there is in taking the samples.

There is only a small percentage of fat in milk, and unless the milk be very thoroughly mixed, it will be impossible to get a representative sample. If one will take a quantity of milk and mix a small amount of butter or cheese color with it, this can be readily seen. It will take considerable mixing before the mixture is of a uniform color, showing no streaks of the butter-color nor all white places. It requires just as much if not more mixing to mix evenly the milk and cream. Each patron should insist that his milk be properly mixed before the sample is taken.

The chance of an incorrect sample is much greater when it is taken by the ordinary dipper method, where a small dipper holding about a thimbleful is used to take the sample. Ordinarily it is simply dipped into the milk, and emptied into the composite test-bottle with the other samples thus secured. There is no particular objection to the dipper method if the milk is first properly mixed, but as this is very seldom done, a more accurate means should be used for securing the sample.

The sampling-tube method is reasonably accurate. A long tube open at each end is pushed down through the milk. When the tube strikes the bottom of the can, the forefinger is placed over the upper opening, and the tube removed from the can. The air pressure will hold the milk in the tube until the finger is released to let the contents into the bottle. With this method it is not so necessary to mix the milk so thoroughly, as the sample secured is taken from all portions of the milk from the top to the bottom of the can. The tube not only takes a representative sample, but a proportionate sample, which is a fairer method.

The Scovel sampling-tube is an improved type. Over the bottom of it fits a cap, capable of sliding up the tube, which has a solid bottom, but holes cut out of the sides, through which the milk is admitted as the tube is thrust down through the milk. When it strikes the bottom of the vessel, the cap is forced up onto the tube, closing the openings, and retaining the sample of milk.

But even with the Scovel sampling-tube care must be exercised to use it properly. It should be pushed through the milk slowly, so that it will fill as it passes through the milk. If shoved down rapidly, little milk will enter until it reaches the bottom, which would give it the same objection as the dipper method. Another point to observe in using the sampling-tube is to keep the forefinger off the top while it is passing through the milk. It should be rinsed after each sample.

The McKay sampling-tube is an improvement over the Scovel. It consists of an inner tube, fitting closely within an outer, but capable of turning in it. A row of slots runs down the sides of both the inner and outer tubes, both of which are closed below. The inner tube is first turned so that the slots in it are covered. No milk enters the tube as it is thrust down into the milk. When it reaches the bottom the inner tube is turned so its slot corresponds with the slot in the outer tube, thus letting the milk in all along its length. It is thus almost impossible to get it filled with anything but a representative sample.

Another method, although not very generally practised, is the drip method. A small hole is cut in the conducting spout from the weigh can, and as the milk runs out the spout, the milk that leaks out this hole is saved for the sample. This is con-

siderably more bother than the other methods, and while it is accurate and correct, getting both a representative sample and a proportionate one, it is not so practical as the sampling-tube.

The sampling of milk as it is often done at creameries does not give the patron fair treatment. He should insist upon a representative, proportionate sample being taken, which is only possible from a thoroughly-mixed milk or by careful use of the sampling-tube or drip method. A difference of a part of one per cent. will run into dollars on the semi-monthly dividend, and proper sampling is of just as much and more importance as proper testing.

LYNFORD J. HAYNES.

From Oil-Mills to Feed-Lots

As a general principle, he is a wise dairyman or beef-raiser who feeds his stock as far as possible on the produce of his own farm. But in a good many instances, where land values are high and acreage limited, it is necessary and businesslike for the feeder to buy and use concentrates, in addition to home-grown feeds. A knowledge of commercial concentrates and their properties is, at any rate, a valuable part of a feeder's mental equipment. In this article I will take up one class of the standard concentrates—the oil-mill by-products.

Linseed

Linseed (flaxseed) may be used as such or in the form of cake or meal. The whole seed contains too much oil to be used in large quantities, even if the oil could not be turned to more profitable account than to be used as cattle-food. Another valid objection to the use of whole linseed is that much of it passes undigested through the animal, unless it has been so prepared by boiling that the seeds have bursted and so come under the influence of the digestive fluids.

Linseed-meal is of two classes, the crushed meal (old process) and the extracted meal (new process). In the first, the seed is subjected to hydraulic pressure and loses some of its oil in the process, but still retains a good proportion of it. The extracted meal is treated with ether, which takes away almost the whole of the oil. Thus it is very material that the farmer should know whether the linseed-meal he is buying is "old process" or "new process." "New process" meal is also known as Cleveland meal. As it contains all the proteid of the linseed it is a valuable food, particularly for dairy cows, and it is the only form in which they should get linseed. Linseed-oil makes inferior butter, but Cleveland meal contains practically no oil. The whole seed, properly boiled, and the "old process" meal, with the oil in it, are suitable for sick animals, but too expensive for the general stock.

Linseed-cake is the same as "old process" meal, except in form. That is, the cake is the crushed linseed as it comes from the press, and the meal is merely the cake ground up fine for convenience. Natural linseed contains as much as thirty-four per cent. oil, while some cakes have less than seven per cent. The harder the cake is, the greater has been the pressure used in making it, and consequently the less oil it contains. A good cake should be moderately soft. Linseed-cake is essentially a fattening food, but, being of a bland and laxative nature, it is very useful for delicate stock.

Although the purchaser is protected by the law to a certain extent, there is still a good deal of adulteration of meal or making cake of inferior seed. A common guarantee runs to the effect that the cake is "made from linseed, genuine as imported." This guarantee is worth nothing, as anything may be imported.

Cotton-Seed

Cotton-seed comes on the market chiefly as hulled cotton-seed cake, occasionally as unhulled cotton-seed cake, and as cotton-seed meal. Cotton-seed hulls are of low feeding value and digestibility, but are considerably fed in the cotton belt, where they can be had cheap. These hulls are removed at the beginning of the extraction of cotton-seed oil, which is somewhat like the old process of linseed-oil extraction. The resulting cotton-seed cake is yellow. Where the hulls are not removed, the cake is full of black or dark brown shells. Both these cakes contain a high proportion of nutrients.

They are found to be rather indigestible for very young stock and for swine, but for dairy cows and fattening and growing stock cotton-seed cake or meal is particularly useful. Unhulled cotton-seed cake is found to possess an astringent property, which makes it necessary to give this cake in combination with laxative food. This

property also makes it a useful corrective of the bowels of cattle and sheep when they are on young or sappy grass.

Besides the hulls, cotton-seed cake is apt to contain sometimes a quantity of cotton-wool, which is very dangerous and has sometimes caused the death of stock. A point of some importance is the great improvement in the manure which results from the use of cotton-seed as a food. No other farm food equals it in this respect.

Other Oil-Mill By-Products

Palm-nut meal is also a residue of the oil-mills, not so commonly used by American feeders as the foregoing. It varies a good deal in composition, being usually richer than linseed and cotton-seed cake in oil and carbohydrates, but poorer in proteid. It makes a good supplemental food for calves, after being soaked in hot water several hours. Stephens, in the "Rock of the Farm," maintains that an equal mixture of palm-nut meal and cotton-seed cake is equivalent in feeding properties to linseed cake or meal and considerably less in cost.

Rape-seed cake (or meal), when pure, is a good cattle-food, but the difficulty to get it pure is so great that it is seldom used for food. Its principal impurity is mustard-seed. The late Doctor Voelcker concluded, from the analysis of a sample submitted to him, that a half cake of that particular composition contained enough essential oil of mustard to kill a bullock. At its best, when pure, cattle do not take to it readily at first, though they do get to eat it kindly after a time. It gives a turnip flavor to the milk if given to dairy cows. It has been found that boiling water decomposes the dangerous principle of mustard so that rape-seed cake should be prepared for the stock by breaking, mixing with chopped straw and saturating with boiling water.

Cocanut-meal is used to some extent in the West with good results in the dairy. Peanut-meal and cake made from sunflower seed have been tested on this side of the water, but not widely introduced.

All the cakes made from oil seeds are liable to become rancid and musty if exposed to damp and they soon become quite unfit for food. They should be kept in a well-ventilated, dry place built in such a way that the air will play all around them. With this object they should stand away eight or ten inches from the wall, and should be raised off the ground. When these precautions are observed, well-made linseed-cake will keep for several months without loss, but cotton-oil cake can not be relied on to keep much more than a month.

The cake form of all these foods is most popular with the foreign trade, the ground or meal form for domestic use. The latter has the advantage of being easily handled and conveniently fed, but it is easier to adulterate than the cake, which must be adulterated before going into the press, if at all.

W. R. GILBERT.

"Scrub" care and feed never will develop the best qualities in thoroughbred stock.

The quickest plan by which you will be induced to build a silo is to notice the profits your neighbor derives from his.

Nothing on the farm nowadays contributes more to the farmer's dream of a fine large motor-car than a few litters of pigs averaging about nine to the sow.

Chop up the green, juicy corn-stalks when feeding the early corn to hogs. They relish the stalks very much if they are in a convenient form for them to extract the highly nutritious succulence by chewing.

Could They Be More Foolish?

The best proof that common cream separators are out-of-date is the fact that they contain 40 to 60 disks or other contraptions. They need such contraptions simply because they lack skimming force. Since they lack skimming force, they are neither modern nor properly built. In view of these facts, could any maker or agent of common cream separators be more foolish or incorrect than to claim that disks or other contraptions make, or are needed in, a modern machine?

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Dairy Tubular Bowl. Made right. No disks needed.



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What About Duty to the Public?

THIS journal has taken the position that the railways of the nation have not profited by their experience in the car shortage of 1906 and 1907 to the extent of equipping themselves for the handling of the tonnage offered in flush times. Events from time to time seem to indicate that this position is correct. As this is written advices from the Texas peach-field state that a great portion of this crop, the heaviest in the history of the country, is rotting on the trees or in the crates awaiting shipment. The railways cannot furnish refrigerator cars.

Such a condition of things shows the railways unfaithful to the duty they took upon themselves when they accepted the privileges conceded to them in their charters. Railway men say that equipment has not been added to the railway properties as fast as might be wished since the last great car shortage on account of the inability of the roads to borrow money on reasonable terms, and the necessity of paying dividends and fixed charges. This is no excuse in the realm of morals. The service is due and owing to the people, whether dividends are paid or not. The Texas peach-grower has to rely on the railways to carry his goods because the government has provided him with no other highway; but the investor put his money in railway stocks voluntarily. The investor, rather than the producer, should suffer when it comes to a choice.

When a railway serves the stockholder first and the shippers second, it walks on dangerous ground. The time is here when inquiry will be made as to what rights the railways have when they fail to serve. What about the growers and eaters of peaches?

* * *

Some farm folks can put on style and look well, and others can leave it off and look even better.

Does your dog feel like coming to meet you when you come home, or does he drop his tail and take to the barn?

A colored customer once said, "I jist despise to peel little 'taters.'" Yet some men keep this kind at home and make the women peel them. Don't waste time on them. Keep good ones.

If you are tempted to move to some other state and get rich, sit down and write an ad. for your place describing all its good points of wood, water and climate. Now, read it over. Isn't that just the place you were looking for? No other would suit you as well; better stay there.

* * *

Packing the Plowed Ground

AN EXCHANGE says that on a given piece of ground it believes it is possible to increase the yield of corn twenty-five per cent. by good cultural methods; and it gives the practice of disking spring plowing before planting as one of these methods. It cites the instance of two fields, one of which was double disked and harrowed before planting, and the other only harrowed. The condition of the corn in mid-season is described as greatly in favor of the disked field.

Why is this? It is partly because of the better tilth on the surface of the disked field; but not entirely for that reason. Indeed, that is probably the least of the causes of the better corn. The great reason, it is probable, is that the disking packed the bottom of the furrow slice and made it possible for the moisture to soak up from below as the corn needed it. A cavity or a loose spot in the bottom of the furrow slice means a poor hill of corn whether the season be wet or dry. If wet, it complicates the drainage problem. If dry, it means a spot where moisture from below is cut off in its upward course.

Campbell, the dry-farming missionary, invented a sub-surface packer which packs the bottom of the furrow slice and leaves the top loose. It seems to us that such a tool is worth trying in the humid regions. Probably some of our readers have tried it. If so, they ought to give the rest of us the results.

Love is one thing that spoils in cold storage.

The road to the poor-house lies over empty bottles.

A very short man can live so as to be looked up to.

Are We Americans Up to Date?

WE ARE apt to think ourselves the blamest smartest race under the sun; but are we up to date and abreast of the times? The way the Danish dairymen have learned to coöperate makes of us a sorry spectacle; and the description of the farmer leagues in Germany in a recent number of the Weekly Consular and Trade Reports gives us reason to wonder whether we may not learn of our German brethren, also.

The farmers of Germany have coöperative savings and loan associations through which farmers have helped each other financially to the extent of over three hundred million dollars.

They have a coöperative purchasing society with over thirteen millions of dollars in assets and a membership of nearly a quarter of a million farmers. The average sum of individual purchases last year was one hundred and four dollars—so the volume of business was immense. The most important commodity handled was fertilizers, with feed, seeds, coal and agricultural machinery following in the order given.

The seventeen hundred and nineteen coöperative dairying societies of Germany last year sold products to the value of \$46,385,649. There are one hundred and twenty-one societies coöperatively producing alcohol distilled mostly from potatoes—probably denatured



A Coöperative Dairy at West Middleton, Wisconsin—Where Coöperation Makes the Farmers Happy

alcohol in the main. Seventeen societies are in the starch business, sixty-nine handle eggs and poultry, one hundred and thirty societies are grape-growers' and wine-growers' leagues, and one hundred are stock-raisers' associations.

All these are federated into a huge imperial association. Here are two quotations from the report which are worth pondering over.

"The unions grew rapidly [in the latter part of the nineteenth century], their greatest growth being coincident in time with the centralization of capital and the formation of industrial trusts."

In other words, the farmers of Germany made an effort at least to fight trusts with their own weapons—the consolidation of individual effort into collective effort.

"An eminent German economist," says the report, "recently stated that the significance of the agricultural unions of Germany lies in their successful advocacy of honest business dealing, in their insistence on cash payments and on economy in operating expenses, in their struggle against usury and deception, in the business and moral training which they give to the lower and middle classes, and in the happy combination of progressive principles and brotherly feeling which they stimulate."

Does the reader belong to any farmers' organization? If not, why not? The Farmers' Union, the Society of Equity, the Grange—all these are trying to do in America what these societies are described as doing in Germany. Get into that one nearest you. If there is a coöperative dairy, stock-breeding or marketing association, get into it. If there isn't one, talk it up with the neighbors and organize one. Coöperation is the hope of the farm.

Space in the Corn-Hill

PROFESSOR HARTLEY of the Department of Agriculture has written a bulletin on corn-planting which records his researches in the effects of crowding corn-plants in the hill. Instead of dropping the corn from a single hole, he spaces them by placing them at the corners of a five-inch square and by similar methods. He finds that the spreading of the hill over more ground results in an increased yield of at least five per cent. on the average. In some cases it was eleven per cent.

The professor has rediscovered a truth which the almost universal adoption of horse planters has caused most of the world to forget. Forty years ago was the era of hand planters. The farmer took a box of corn with a plunger at the bottom and jabbed it into the ground at the "check" made by the marker. The seed was planted in a space three inches long and half an inch wide. It looked much better when just up than corn dropped by hand or put in by a horse planter—the hills were so close and the rows so straight. But we found out that the dropped or horse-planted corn yielded best in the fall. The hand planter crowded the corn too much. It took no research beyond the measuring of the cribs to tell us that.

The horse planter was better than the hand planter for other reasons than the amount per day it would plant. It gave us better yields, and we knew why. And those who remember that experience ought to be ready to accept Professor Hartley's conclusions that the more the hills are scattered—provided that they are close enough to accommodate the cultivator—the better.

* * *

Buying stuff on the monthly-payment plan makes time pass swiftly.

The hired man may not say so, but he likes it when you praise him. Some men never give their hands a word aside from gruff orders.

It is not necessary for the farmer to do as much hard work as his best hand. He must take time to keep himself informed about the best time to do everything.

Any neighbor near you who has had sickness or accident, and can't save his crops? Then all turn in and do it free, for a frolic. You might need it done for you some day.

We often hear a great cry about the farms being deserted. The farms are not deserted; they simply are not worked by men who make the most of them. There are farmers enough to make this country blossom like the rose if they would all do the very best they can every year and everywhere.

Mr. Welliver's "We"

PLEASE do not be startled by the use of the expression "we farmers" in a recent Washington letter by Mr. Welliver. He has bought a farm at Rockville, fifteen miles from Washington, and is about to engage in that wrestle which a Western man must have when he tries farming in the East. The editor of FARM AND FIRESIDE sympathizes with him and glories in his spunk.

Let your wife jam you up to the town hitch-rack and leave you there in the sweltering heat while she does her trading. You'll hunt up a shade for the team the next time you come to town, even if it does cost you a few cents extra to do it.

The Government on Bees

UNCLE SAM has issued a bulletin on bees. It is Farmers' Bulletin No. 397, and if the writer was keeping bees or in that way inclined, he would straightway ask Uncle Jim Wilson for it. And your congressman or senator would be pleased to mail it to you, no doubt. And speaking of bees, all who think it fatal to bees to frequent sprayed orchards, please hold up your hands. Quite a sprinkling! Well, if you wait until the proper time to spray for moth—until the bloom is quite fallen, the bees won't be injured. Please remember that until next spring.



I HAVE been wondering lately how many of us know that they're out for us farmers.

"They" means the politicians.

"They" need the farmers very much. Need them to keep politics orthodox, to suppress the rising tide of independence, to save the interests from the legislative effects of the new insurgency and to keep things generally "safe and sane."

"They" have their state machines and local Tammanys in cities; but to get the farmers organized and managed has always been a hard problem.

So you will be interested, perhaps, to know that "they" have a plan figured out to get their grip on the farmer and keep him politically "right."

It is to be done through the conversion of the rural mail delivery into a fine political machine. It is due to be pulled off next winter, unless the farmers and the rural carriers and other people awaken to the situation and make their protest strong enough to be effective.

You know, since agriculture got a hair-cut in the cartoons and has come to be represented by the artists with the same kind of portraiture that they used to employ in depicting the plutocrat, the farmer is a person of vastly greater political consideration. Financially, instead of being chiefly useful to loan money to, he has latterly become peculiarly desirable as a person from whom to borrow money. Uncle Reuben is a back number; styles in gold brick have been extensively modified for his special accommodation. Speaking generally, he doesn't fall for the old game. He reads too much, knows too much and has too many opinions of his own. Consequently, when they set about nowadays to pass a package over to the rural community they do it up in blue ribbons and ask the farmer to examine the contents before making the initial payment.

An Illuminated Cover for a Neat Package

Just lately they have been putting an illuminated cover on a particularly neat package in which our agricultural brethren are being urged to invest. Quite a lot of our leading statesmen and politicians are out to sell this new line of goods to the farmer, and I am going to take the liberty in this letter of removing the lithographed cover and examining the contents to see whether they comply with the requirements of the political pure-food law.

It is proposed to reorganize the rural free delivery with a view to making it more efficient and economical. So they said. To do this, the plan is to adopt the contract system of getting rural mail delivered. Instead of having rural carriers government employees, under this proposed plan the business of delivering rural mail would be farmed out to big contractors, who would take contracts for territories, would hire their own carriers at their own terms, deliver the mail in their own way and be paid under a system of competitive bidding. The carrier would become the contractor's hired man instead of the government's. The carrier would cease to be a government official, directly responsible to the post-office department and receiving a salary fixed by law. He would become the contractor's hired hand, paid, of course, a wage as low as the traffic would bear. A general contractor might get one big contract to do all the delivering for the entire state and then farm it out by counties or by congressional districts or in any other fashion he saw fit. He would, of course, expect to make a profit on the work of every man employed by him, and his constant effort naturally would be to make the service just as cheap as possible consistent with keeping himself out of trouble with the post-office authorities.

The people who are advocating this revolutionized method insist that great economies could be effected. They say that the carriers are paid more than is necessary to get the work done, and that just as good service could be given for less money. As matters stand now, the rural free delivery service is of small use as a political machine. The carriers can not be held up for campaign contributions and the regulations of the department prohibit them from interfering in politics. There is no doubt that a good many of them manage to violate this regulation, but the fact remains that the tens of thousands of rural carriers are a negligible political factor as compared, for instance, to the sixty thousand postmasters in the country. If the rural delivery were placed on the contract basis, not only would the contractors be expected to contribute very

By Judson C. Welliver

liberally to campaign funds, but they would also be expected to use their employees, the carriers, as a great political machine for handling politics in the rural districts.

Somehow I am afflicted with doubt as to whether the farmer cares to be managed in this fashion. I have a feeling that the most important thing a letter-carrier can do is to carry letters, not to plug caucuses. I perfectly recognize that a lot of folks, who want caucuses plugged, will not agree with me. But if the farmers and the rural carriers are astute enough to know on which side their bread is buttered, they will get busy organizing a protest against this scheme that will be heard all the way to Washington and that will come up from every rural route in the country.

Would Revive the Old "Star Route" Graft

It is twenty-five years or more since the country was shocked by the exposure of the famous old Star Route Mail Contract frauds and grafts. Nobody ever did find out how many millions were involved in those scandals, compared with which the postal frauds of a few years ago were insignificant. The point which needs attention right now is that this contract scheme would put the entire rural delivery on exactly the same basis that it was in the good old days of Star Route fraud, bad service and political jobbery.

It sounds preposterous, of course, and you will probably refuse to believe that there is any serious probability of such a reversion to a discredited method of doing a great business. But if you knew the whole situation at Washington involved in this matter, you would realize that it is very dangerous. In the first place, Mr. Frank H. Hitchcock, postmaster-general and politician-in-chief to the Taft administration, has indicated very clearly that he leans toward the contract plan. Mr. Hitchcock will be recollected as the gentleman who gum-shoed around the country for a good part of a year, lining up delegates to the convention which nominated President Taft. Mr. Hitchcock just at present confronts the uncomfortable prospect of having to manage a similar campaign in 1912. He is a fine liner-up, is Mr. Hitchcock; a perfect gentleman, particularly noted for the fact that his socks always exactly match the color of his necktie and that his trousers are always creased in the most exacting and correct fashion. He is a good promiser, too. Maybe some day we will know more accurately than now just what Mr. Hitchcock promised to the water-power trust and the Morgan-Guggenheim interests, in order to secure their support in 1908. All we know now is that it was plenty and the efforts to make the promises good resulted in the scandals that have involved the interior department under Mr. Ballinger. It is going to be put up to Congress and the country very soon to decide whether they want Mr. Hitchcock empowered, in his capacity as boss of the post-office department and boss of the Republican National Committee, to make political capital of the post-office department and the rural free delivery, in similar fashion.

Mr. Hitchcock is a cold-blooded, calculating, machine politician. You may think he is too nice a young man to descend to employment of the postal service for political purposes. Well, as to that, I can only say that if you will loaf around Washington a while and gather up a few of the stories about how congressmen have their post-office patronage taken away from them if their votes don't happen to please Mr. Hitchcock, you will take another think. Mr. Hitchcock is just the kind of innocent, mild-mannered young person who knows how to look peculiarly horrified at machine methods—and who is peculiarly expert in employing them.

The chairman of the Senate Committee on Post-Offices is Penrose of Pennsylvania. Mr. Penrose is the prince of machine politicians. He is in favor of putting the rural delivery on the contract basis.

The Hon. John W. Weeks of Massachusetts is chairman of the House Committee on Post-Offices. If the Republicans control the next house and if insurgency is strong enough to prevent Cannon's reelection as speaker, Mr. Weeks will be one of the strongest candidates of the old Cannon organization for speaker. He is looked upon as a man eminently fitted to run that job along the same general lines and for the promotion of the same governmental policies and ideals

as Cannon. And Mr. Weeks, likewise, is in favor of the contract plan of handling the rural delivery.

Besides these gentlemen, who will have more to do with deciding the matter than anybody else, there is a very strong element in Congress which favors the contract plan. The movement gained a good deal of headway the latter part of the recent session. It is going to be pushed vigorously next winter.

Rural mail-carriers are paid from three hundred and ninety-six dollars to nine hundred dollars a year. Comparatively few of them get anything like the latter figure. Advocates of the contract plan insist that they are paid too much and that private contractors would be able to get them to work for so much less that the entire business could be done at a large saving, and still leave good profits for the contractor. I have thought sometimes that it would be just as reasonable to have Congress economize by discontinuing the practice of furnishing its members with free Apollinaris, corkscrews and manicure-sets; but, of course, that's a populist notion that under no circumstances could be entitled to the amiable consideration of high-minded statesmen like Mr. Hitchcock and Senator Penrose.

Postal Deficit Would Become a Surplus

These folks who want to economize in the post-office department by putting the rural free delivery back on the old graft basis are always pointing to the fact that the department is run at a loss. They tell us that the deficit last year was seventeen million dollars and that the rural free delivery service cost twenty-eight million dollars more than it produced in revenue. Now, as to the seventeen-million-dollar deficit, it would be turned into a huge surplus if a parcels post system were added to the present functions of the department. It would be added if it were not for the pull of the express companies. And as to the loss of twenty-eight million dollars a year on the rural delivery service, that likewise would be wiped out and turned into a profit, so that rural free delivery would not only be self-sustaining, but actually profitable, if a parcels post service were given to the rural routes alone.

In short, what the post-office department needs is to be put on a sensible business basis, to provide the people with the same service that post-offices in other countries give to their people. I suppose it is a waste of time to remind any reader of this paper that the United States is the only important civilized country whose post-office department does not include an efficient and highly-organized system for the transmission of parcels. All this talk about the rural delivery service being conducted at a loss and about the farmer being the recipient of Uncle Sam's charity to the extent of twenty-eight million dollars a year is unmitigated rot. The fact is that the rural free delivery is not conducted at a loss of anything like twenty-eight million dollars a year, even under present circumstances. People who have studied the matter carefully declare that if a parcels post were established at fair rates, the farmers would be such good patrons of it that the rural free delivery would actually be conducted at a larger profit to the government than the city delivery service, because city people have less occasion to transport parcels by mail.

If the rural delivery service is ever turned over to contractors, Uncle Reuben may just as well make up his mind that his chance of getting a parcels post has gone glimmering for another ten years. That's another part of the game. The demand for parcels post has been gaining strength so fast that it has been necessary, in order to counteract it, to get up this agitation for delivery by contract, as a diversion and also as a means to provide some more arguments for people who are always urging that the government isn't competent to do any real business anyhow.

If you want to save the rural free delivery from degenerating into a vicious political machine; if you want to save the carriers from having their already inadequate wages reduced, and, particularly, if you want to get a parcels post established in this country within the next generation, you will do well, when your congressman comes around asking for your vote this fall, to tell him he needn't mind about kissing the baby this campaign and that you won't need that five-cent cigar he is offering to donate, but that you do want his assurance that he will vote and work against returning the rural delivery service to the old Star Route graft basis. That's all.

The Fattening of Big Hungry

An Agricultural Adventure Story

By Eugene Wood, Author of "Back Home," "Folks Back Home," etc.

BIG HUNGRY. That was its name.

If you rode through that section, though, now and saw it bring forth six or seven truck crops each year, worth on the average two hundred and fifty dollars an acre, and three or four crops of general farm produce, worth on the average sixty dollars an acre; if you saw the pure-bred Jerseys that have replaced the skin-poor native cows, and the pure-bred Berkshires that have replaced the hogs apparently built for speed, the fine horses and mules; if you noted how clean of weeds and undergrowth not only the fence-corners were, but also the highroads, hard white chert roads that shed the heaviest rains, replacing the troughs of sand through which the teams used to have to drag their loads; if you saw—well, if you stopped your buggy on some



"Now, then, which boy can harness up the quickest?"

overlooking point and beheld not one darn thing but what you could eat, it would be hard to believe that ever such a neighborhood could have been called "Big Hungry."

The Fattening of Big Hungry, the getting bigger crop-yields each year by a process that leaves the soil able to produce yet more and more is what I should call an agricultural adventure story. I don't know but it is a kind of a miracle story. For to get such yields out of a gray, pale, sandy top soil underlain by a clay hard enough to hold water like a tin bucket, a hard clay here and there cropping out in "clay galls" on which not even grass will grow is something like Moses fetching water out of the rock. Only, I fancy that venerable law-giver must have had a stout and thoroughly dependable staff with which to rap the rock, whereas what has made Big Hungry spout out fountains of food has been Negro labor from head to hoe, and if you believe all that they tell you about Negro labor, that is not a stout staff, but a broken reed to pierce the hand that leans upon it.

Big Hungry that was, is where the well-known, helpful Tuskegee Institute now is.

"Oh, yes," you say with comprehension, "that's Booker Washington's school every one knows of."

Yes. Only, while I don't want to take one sparkle from Doctor Washington's crown of glory, I want to point out another sparkle in his crown, and that is that he picks out men to work with him who can make good on their part of the undertaking.

I could just as well as not write a bully article about the Department of Agricultural Instruction and the Experiment Station at the Tuskegee Normal and Industrial Institute. In fact, I'd rather than not because Professor G. W. Carver, the director, is quite a man, especially interesting to those who have the notion that a full-blooded negro's head turns to solid bone when he gets to be fifteen years old, up to which time he is as smart as a white boy, after which time he can't learn anything. Professor Carver can correct that theory quite as well as its mate, that chickens hatched in May sleep themselves to death. I'd like to tell you about the breed of cotton he—invented? Is that the word? Carver's Hybrid, an especially thrifty and prolific upland cotton. I'd like to tell you what a fine botanist he is and soil-analyst and what a fine teacher. I'd like to write about that end of the game, but I'm not going to. I'm going to tell about the Department of Agricultural Industries, George R. Bridgeforth, Director, which has done the actual Fattening of Big Hungry. Understand. I'm not belittling the scientific end. Moses should know just where to hit the rock to make the water fly. And (just as important, though too few perceive it) he should know where not to hit the rock. An experiment that is a failure is also a success if it tells you what not to do. But this article is concerned with enlarging the orifice from which the smitten waters gush, and more: With how to make the rod that smites a thoroughly stout and dependable stick. For though there was only one neighborhood officially called "Big Hungry," I have seen lots of other places in the South that might still bear that name.

My notions on education would not have suited Dickens at all. The most ridiculous type of school-teacher he could think of was *Squeers*, whose method was:



How they live before they come in from "the sticks"

"Spell 'wash.'"
"W-a-s-h."
"Spell 'winder.'"
"W-i-n-d-e-r."
"Go and do it."

Only, I'd go farther than *Squeers*. I'd have them wash the window first, and then come back and spell about it.

I suppose the main reason why I think George R. Bridgeforth is such an intelligent man is that he so completely agrees with my notions about education. But instead of merely gassing about it, he has them do it. He makes good. Well enough to talk to the boys about being spry about hitching up and taking care of the harness. But drive the horse and wagon into the school-room. Throw the harness all twisty-ways upon the floor. Now, then, which boy can harness up the quickest? Which boy can adjust it so that the pull favors the horse? Which boy keeps the harness he has charge of in best condition? A prize for you, my son. Honor for you, my son.

Well enough to listen to lectures about worn-out soils and chemical fertilizers and stable manures and legumes and nitrifying bacteria. Fine. Excellent. Only, if it were I, I'm afraid all that wouldn't stick in my noddle as well as seeing how the poor, poor soil came up to high crop-yield under my own hand. In my opinion helping to ream out the orifice through which the fountain of food spouts out is one way of stoutening the staff.

Remember what the staff is made of. Remember that the students of Tuskegee don't come there with a high-school or collegiate education. (By the way, the accent is on the "ke," and the name is pronounced like "Tuskeeg-y" or "Tuskiggy.") I don't suppose that they could tell you whether utor, fruor, fungor, vesor and potior take the genitive or the ablative cases any more than—I can, now. (I used to know, though.) And that's a great drawback to the practical farmer, not to know about the genitive and the ablative cases. They don't come to Tuskegee in automobiles, each with a check-book in his pocket, and papa putting up for them indefinitely. They're poor folks. Terribly poor folks. They're negroes. Perhaps I'd better say they're "niggers," and be done with it. I'll tell you: They're little if any higher in the social scale than the Hunkies that work in the steel mills of Pittsburg for



"They don't come to Tuskegee in automobiles"

one dollar and sixty-five cents a day, twelve hours a day, seven days a week, and every fortnight, when they change to the other shift, a day twenty-four hours long. Niggers are not such driven cattle as that and they are better fed.

They're poor folks, and if they are to learn how to farm it so that the Big Hungries of the Sunny Southland shall grow fat, they've got to work their own way through. They can go to day school, working three days of the week, or they can go to night school and work six days in the week and study evenings. They are paid forty cents a day or sixty cents a day. But then they get their board in the big fine dining-hall with music at meals played for the whole two thousand of them at a time, they get their clean, neat rooms and beds and baths, they get their laundry, all for eight dollars and fifty cents a month. A month! How about that? A boy with nothing whatever in his pocket after he has paid his entrance fee of ten dollars may get his education and come out with money in his pocket. And, also, with applications for his services from as far-off as Montana.

Many of the students come in "from the sticks," from the tall piney woods where the whole family, pa, ma and six or seven children, live all in a one-room cabin, where if somebody spends the night, they have to stretch a rope across and hang up a quilt or else, as one of the Conference Agents told me, "You have to look straight till the old woman gets into bed, and when she gets the covers pulled up around her, she gives a long groan, and then they blow out the light and you turn in with the children on a pallet on the floor, all but the two or three that share your bed."

They come in "from the sticks" where their farming is so poor, that they can't make more than a quarter of a bale of cotton to the acre, and so they have to plant clear up to the house itself, leaving no room for any other crop, and they go to town to buy hog-meat and corn-meal, they go to town even for a watermelon. They come in "from the sticks," where the storekeeper "advances" them, grub-stakes them, lets them have what supplies they need while they make their crop, and then when it is sold, he takes out what he thinks he ought to have by a process of arithmetic described in the popular rhyme:

Aught's a aught
An' a figger's a figger;
All fo' the white man
An' nothin' fo' the nigger.

Now, when they come in "from the sticks," you can understand that they don't know much about table manners and personal cleanliness; not much about diversified farming and soil-conservation; not much about estimating the cost of making a crop and getting ahead. These things they learn at Tuskegee Institute. Utor, fruor, fungor, vesor and potior, and whether they take the genitive or the ablative is something they neglect at Tuskegee Institute. Kind of pass that by, as it were.

Don't get the notion that it is only the "inferior race" that lives in such a slack way out "in the sticks." The superior race often lives in a still more inferior way. White farmers were quite sure, until a few years ago, that oats could not be grown in Macon County, Alabama. They knew all about that. They couldn't grow "English peas," either, meaning by that garden-peas as distinguished from cow-peas. A few pea-vines grew here and there as curiosities. It was the Department of Agricultural Industries at Tuskegee, all negroes, that showed the superior race that it was only a matter of intelligent preparation of the seed-bed and putting on nitrate of soda at the right time. Commencement Day at the Institute isn't only talk; it's a kind of farmers' institute. There are exhibits of oats grown on properly-prepared soil, and right alongside the poor starved-looking oats grown on badly-prepared soil; the prettiest Marrowfat peas you ever laid eyes on, garden vegetables and fruits, a peach-tree with ripe peaches on it, fine, big, hard cabbages, instead of spindling collards—all kinds of truck. White folks come from afar to see and to ask how and to wish there were such schools for white boys. In Macon County, where five years ago there weren't any oats to speak of, there are now five thousand acres.

White farmers may excuse weeds and undergrowth in fence-corners and along the roads by saying that it would cost too much to send a man along there with a scythe, but the negro boy at Tuskegee knows that a flock of goats will do that better than a man, not only for nothing, but for meat for him, meat and milk, also, if he doesn't want to raise the kids.

White farmers may pay out good money for those sight-unseen mysteries, commercial fertilizers, but the negro boy who works and studies under Bridgeforth learns that the best way to bring up worn-out soils is to put humus into them, and "humus" is not merely an uncommon word: it means the stable manure from one hundred and eighty horses and mules, two hundred and forty head of cattle, one thousand head of hogs, three hundred and twenty head of goats, one thousand chickens: it means two thousand five hundred tons a year of composted pine-needles and forest leaves and weeds and trash and swamp muck and all such. Put that on the soil, forty tons to the acre, and you get something. The one hundred and twenty-five dollars an acre from strawberries is a better argument against cotton as a sole and only crop than any a man can make with his mouth only.

Bridgeforth won't even put lime on the land. He knows the soil lacks lime. But what's the sense of hauling land when you've got land? Maybe it won't grow what it could if it had lime in it, but it will grow two hundred and sixty-seven bushels of sweet potatoes to the acre without lime. That isn't so bad. They've all got mouths for sweet potatoes thereabouts, men and beasts. They even can sweet potatoes for pies. And whereas in the South everybody'll tell you: "You cannot keep sweet potatoes over the winter," the Department of Agricultural Industries does keep 'em through the winter. They know how. The negro boy that works at it knows how, too.

I saw an article in a newspaper the other day preparing us all for a meatless future. We ought to live on cereals, it said, because it takes less land to grow the grains that will keep us alive than will pasture beef, mutton and pork. It may have been a very learned man that wrote that, but the negro boy that sees how hogs will fatten on sweet potatoes and how cattle are fattened by the soiling process knows better. At Tuskegee they have discovered that it is poor economy to let the cattle crop the grass. To drive her back and forth from the pasture-lot is to use up good food for walking. You can't sell her motion: you can sell her milk. Silage in the midsummer months when succulent herbage is scarce, and at other times rape, which will stand three cuttings down to the bud, rutabagas, mangels and all such, which are cheaper than silage, all things considered.

Others may leave their gardens bare and brown in winter, but if the Tuskegee boy does that, it is because he is both blind and deaf, for the beautiful cabbages thriving all the winter through he cannot help seeing, for he hoes them, and he must be hard of hearing who never got the word: "A green garden all the year," for they're ding-donging that at Tuskegee all the time.

[CONCLUDED ON PAGE 15]



How they live after they have been at Tuskegee

Some Good Poems

Spring Life

By Grace F. Coolidge

A LITTLE bird swayed in the apple-blossoms fair,
Singing his heart out in melody rare.
Filled with the gladness and warmth of spring,
What could the little bird do but sing?

A little flower lovingly touched by the breeze,
Gave to it fragments and sweets to the bees.
Being allowed in the sunshine to live,
What could the little flower do but give?

A little child played with the buttercup sweet,
And laughed as the grasses trailed over her feet.
With a heart as light as the blossoms of May,
What could the little child do but play?

Let Us Smile

THE thing that goes the farthest toward making life worth while,
That costs the least and does the most, is just a pleasant smile.
The smile that bubbles from a heart that loves its fellow-men
Will drive away the cloud of gloom and coax the sun again.
It's full of worth and goodness, too, with manly kindness blent—
It's worth a million dollars, and doesn't cost a cent.
—From the book, "Heart Throbs," in National Magazine.

Smile and Never Heed Me

By Charles Swain

THOUGH, when other maids stand by,
I may deign thee no reply,
Turn not then away and sigh—
Smile and never heed me!
If our love, indeed, be such
As must thrill at every touch,
Why should others learn as much?
Smile and never heed me!

Even if, with maiden pride,
I should bid thee quit my side,
Take this lesson for thy guide,
Smile and never heed me!
But when stars and twilight meet,
And the dew is falling sweet
And thou hear'st my coming feet,
Then—thou then—mayst heed me!

United Forever

Martha Shepard Lippincott

ONE heart, one soul forever,
Such may our lives e'er be,
And blending in communion,
In perfect harmony.
Our thoughts and lives uniting
Will bind our hearts in one,
And thus in soul's communion
Love's victory is won.

One heart, one soul forever,
Is any joy like this?
Who for the world's great riches
Love's happiness would miss?
There nothing is so precious
As two hearts joined in one,
And thus it is forever,
Life's victory is won.

One heart, one soul forever,
Oh, darling, who can know
The bliss and joy eternal
That from our love will grow?
Thou art my precious angel,
To guide my soul aright,
And how thy eyes will lead me
By their own sweet love light.

Three Days

By James R. Gilmore

SO MUCH to do; so little done!
Ah! yesternight I saw the sun
Sink beamless down the vaulted gray—
The ghastly ghost of Yesterday.

So little done; so much to do!
Each morning breaks on conflicts new;
But eager, brave, I'll join the fray
And fight the battle of To-Day.

So much to do; so little done!
But when it's o'er—the victory won—
Oh! then, my soul, this strife and sorrow
Will end in that great, glad To-Morrow.

Sweet Western Wind

By Robert Herrick

SWEET Western wind, whose luck it is
Made rival with the air,
To give Perenna's lip a kiss
And fan her wanton hair.

Bring me but one! I'll promise thee,
Instead of common bowers,
Thy wings shall be embalmed by me
And all beset with flowers.

The Fattening of Big Hungry

[CONTINUED FROM PAGE 14]

That soil certainly has to hump itself. It isn't just one crop a year and quit and call that a day. For instance, in February, they plant rutabagas and bed the rape. When the rape gets up to five or six leaves, they cut that down to the bud. About the middle of April they plant corn in between the rows of rape. When the corn-roots begin to reach out for more food, they pull up the rape and feed it to the hogs and cattle. At next to the last plowing of the corn they put in two lines of cow-peas. When that's taken off the ground is seeded down to oats for the winter.

Commencement Day at Tuskegee Institute isn't quite like the same festivity at the utor, fruor, fungor, vescor and potior places. Instead of orations on "Our Mission in Life" and "Beyond the Alps Lies Ataly—" Is that right? Doesn't sound right somehow. Well, no matter—Instead of such they have, for example, the Salutatory on "Managing a Dairy," with Georgia II on the chapel platform milked and her milk strained and cooled and bottled before your eyes. They run two milk routes out of the institute just to teach boys how to do it. The milk is sold at seven cents a quart. Georgia II. is a mighty pretty Jersey, very well-behaved even on a chapel platform, which is exigent of a cow. But her being house-broke is not her chiefest charm. She yielded in 1909 eight hundred and forty-two gallons of milk and three hundred and sixty-seven pounds of butter.

A cow under Bridgeforth and his Mr. H. H. Wheeler is not allowed to loaf on the job. Let her fall below five hundred gallons of milk a year, let the Babcock test show too little butter-fat and she is headed toward the slaughter-house where she will exemplify on the Squeers method, the proper

method of fattening and killing beef.

The Department of Agricultural Industries at Tuskegee has two year courses in practical, wage-earning work and instruction in Farming, Truck Gardening, Fruit-Growing, Care and Management of Mules and Horses, Dairy Husbandry, Dairying, Swine-Raising, Beef Production and Slaughtering, and Veterinary Science. It has a two-weeks' course started four years ago with eleven students, the next year seventeen, the next year seventy, the last year four hundred and ninety, many of them walking three to six miles back and forth or driving in in wagons. And then, besides, it keeps going innumerable farmers' conferences and institutes. It keeps district schools up to the mark. Take Rising Star for example: They don't think it fair in Alabama to tax the whites, who have most of the money, to educate the blacks who have most of the children. So Rising Star is built and maintained without a cent from the state or county by the colored people's own poor pennies and nickels and dimes and quarters. It isn't just like an ordinary country school. There is the room with desks and blackboards in it, but there are also a kitchen, a dining-room, a bedroom and a sitting-room. Not only do they study the three R's, but also how to make a fire and clean a stove, how to cook, how to set a table, table manners, how to tidy up and take care of bedrooms and sitting-rooms, how to make gardens and to beautify the yard with lawn and flowers, how to take care of the horse, the cow, the pigs, the chickens, how to sew—in short, they learn

how to live in a superior way.

This is the merest lick and a promise at the story of the Fattening of Big Hungry. And what about the Fattening of all the Big Hungries among the negro communities?



"Commencement Day at Tuskegee Institute"



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A Man, a Woman and a Wheel

By Beulah Tatum

The Man

THIRTY years old and not a soul cares enough about it to say they are happy I am alive!

It seems strange to me that Ruth don't remember it; for it happens to be just five years ago to-day since we were married: she never forgot it before.

All the poets say, "'Tis the woman who remembers;" well, the people who write don't know everything after all, and I suppose a man may dream his own dreams, though no one would believe it.

The woman must talk hers or put them in print so every one says, "How tender! How charming—no man can understand a delicate creature like that!"

Heigh-ho! how it does rain! Just that slanting east rain that goes clear through into your soul, and makes it shiver.

All my plans for a half-day off and a ride with my family, away out into the country, are extinguished.

Who would believe it could be the same time of year as was our wedding-day! Then skies were blue, and roses blossomed everywhere, and the broad roads were bordered with wild flowers as we drove away together.

I suppose roses are blooming now, but somehow I haven't seen many recently. Five years in a law office, with your sweet-heart installed as mistress of your home and ruler of your kingdom certainly teaches a man more than he learned in his entire college course.

This rain seems to be obscuring the present, but the past seems to shine through. I don't suppose a man with a rapidly-growing bald spot is supposed to be romantic, though. But somehow I can feel again the wind blowing across the campus down there by the willows, and see the masses of violets that clustered by the spring.

Ruth, too, little brown-eyed witch, standing there beside the great rocks, her yellow hair all fluffy beneath her Oxford cap.

Funny how a man finds out all at once that there is only one girl in all the world who makes any difference to him, and she makes or mars it all. I never can see a pansy since then but what it all comes back to me, for she wore a great cluster of them that day. And after I had blundered through my story and was afraid to draw a deep breath while I waited for her answer, she held out a pansy and said, "I hope, in all the years of our lives, I may be this to you."

Heart's-ease! Yes, that is the way it all happened, and she has been all I dreamed. But how far short I have fallen! What great things I was to have done before five years had gone. The new house was to have been built; there were dreams of a horse and buggy, too, but I can't even save enough to buy myself a wheel. So that cuts me off from going home to lunch.

It has been uphill, and a steep hill, too. And John Francis, bless him, absorbs all our income that does not absolutely have to go elsewhere. But our little old house is paid for now, and Ruth and John and I have been very happy until lately. What ails Ruth, I can't tell; but the dear girl actually seems to be getting miserly. Her allowance always has been enough to allow her to remember birthdays and things like that. And I do give her all I can spare, but this morning she almost grew angry. I can't understand her. I don't want our married life spoiled by

the money question, and she never asked for more than I could give only since the house was paid for. Have five years wifehood and one year of motherhood made her forget our past?

What with her constant requests for "Five dollars for a present for Nell" and "More money for shoes" I wonder I ever dream of youth.

She doesn't buy herself any new dresses lately. Well, she's all right, anyhow.

I must just work harder and—

Just at this point the office door opened and Bennet Russell, suddenly realizing that he had spent an hour in idle thoughts, turned to greet his partner, and business reigned supreme within while the storm raged without.

The Woman

In a little old-fashioned cottage, lying just beyond the rush and din of the city, the usual peace was sadly disturbed.

The table still was covered with the breakfast dishes, the bird indignantly asserted his wants, the ferns drooped for want of water, and a fat, bald-headed baby sent up an abused wail from his crib. Add to this picture a little figure with her head buried in the couch-pillows, and the dashing rain and leaden sky seem a fitting background. "It's too mean," came from the pillows, "after I've saved and saved for two years and then to fail by a miserable five dollars; this is the day I have to have it, too."

"Oh, John Francis, I love every inch of you, but you have made me spend so much of my hoard that here it is your dear dad's birthday and he couldn't spare me any money to finish out my 'pile.'"

"Ever since I've known how he hates to eat lunch in town, I've saved by hook and crook to get a wheel for him. They aren't half so much in style as they were when I began, either. Everybody has an auto now: oh, well, he won't care, for he'd know I couldn't save any more than for a wheel."

"Last year I had nearly enough saved, and you came along—you fat John Francis, and so I thought of nothing but you, and I've saved so much harder since you came that I've no new dresses at all, and Bennet can't understand what I do with all the extra. So I began asking for money for shoes, for they don't show so much. And I've been wearing two-dollar ones, too; that's the depth of woman's sacrifice."

"This morning I told him I really had to have five dollars for shoes for you and me, both, John! I simply couldn't think of anything else! And he said he was 'afraid I was not so good a manager as I used to be, and as for his flabby-footed youngster, he didn't need shoes until he learned that feet were made to stand on and not to chew.'"

The baby gave a shrill scream at such an insult, and was taken up and petted into good humor.

The rain still pelted the windows, but the good fairy of the home had come back and sunshine seemed to fill the little rooms. The bird sang, the ferns lifted up their heads, the table was cleared as if by magic and John Francis kicked up his shoeless feet in glee.

The Wheel

I knew the name of the city was Buffalo and that I was done, ready to leave the only home I had ever known.

Added to this, I knew the master of the shop, for he told other men my beauties. I thought then I was the best wheel in

the city, and I am sure of it now. Be still, you little black umbrella; you asked my story and I mean to tell it in my own way.

I was just a month old the day all this happened; and had been jostling my neighbor just to feel the power in my wheels, when I heard the master's voice.

He was talking to himself, I thought, and looking at a strange little white paper a messenger-boy had given him. "Pay you the rest when your name-sake gets a whisp of hair." Umph! 'Inclosed find check—Remember, Uncle John, I always pay my debts, and my son goes security for this.' Then he chuckled, folded up the paper and, laying his hand on me, began to talk again. "Ruth always did wheedle me into giving her what she wanted, and having been married so long don't change the child. Cute, to save for Bennet what he couldn't save for himself. They've had a hard pull; be the making of them, though; I'll see if I can't get Stover & Co. to let Bennet have their law business. That would put him on his feet. Yes, I'll take Ruth's hardsaved dollars and let her pay the other five, too; but I'll send her the best wheel in the house. She'll not know but what her check was 'big enough, bless her! She must have the wheel to-day, too; strange how a woman always remembers anything like an anniversary!"

"Here, you proud new 'Model,' I must get you off on the three-o'clock freight; that will just get you there in time."

Then he felt me all over, called two men who crated me, and soon I was hurried to the train and crowded into a dark corner behind other boxes and crates. In a few minutes we were flying along through the city. Just a little way out the train stopped and I was seized and carried out into the light. A long-legged boy loaded me into a cart, a dog trotted after us, and at last we came to a little white house with flowers all around it. A pretty woman came flying to the gate, gave the boy a hammer and hurried him as he uncramed me. Then he wheeled me in here beside you, master umbrella, and went away. Then that little woman danced around me, and hugged me—what are you squeaking at, umbrella? She went and got a fat, blue-eyed baby from somewhere and put him on me. I groaned and was about to remonstrate when some one stepped onto the porch. The woman and baby whisked out of sight, and a big, handsome man came in. He almost fell over me, and then he began to talk:

"Bless me! What-in-the-world? Ruth, little witch, where did this drop from?"

Then he rushed me into that lovely little room where the flowers are. There sat the little woman laughing and crying, and he just picked her up, baby and all!

"It's yours, Bennet! Did you think I'd forgotten you are thirty and that I've belonged to you for five years. Why, there's a cake as big as John Francis! It's covered with pansies, too. Tom and Nell are coming, and, oh, I'll never tease for money again."

She got no farther than that until he said he was a beast; that men couldn't understand a woman's heart, but he would know his "Heart's-ease" better now. Then he took out a package and out rolled some stiff shoes for that inevitable child! They put the shoes on him, and him on me and we rolled out into the dining-room, where they said I was the "centerpiece" for the jolly little dinner that followed.

The wheel leaned back against the wall when its story was done and peace reigned in the cottage.

This, That and the Other

An Insinuation

"MARY, Mary, take the parrot downstairs at once. The master has lost his collar-button."—*The Christian Register*.

A Happy Marriage

MRS. QUACKENBOSCH—"Am you' daughtah happily mar'd, Sistah Sagg?"
 Mrs. Sagg—"She sho' is! Bless' goodness, she's done got a husband dat's skeered to death of her!"—*Woman's Home Companion*.

He Was Still Game

IN A great deal of trepidation a diffident young man called at the office of the father of the girl he was smitten with and stammered:

"Sir, I—I—pardon me, but I want to marry your daughter."

"I'm busy; go and see her mother, young man," said the father.

"I have already seen her mother and I still wish to marry your daughter."—*Everybody's Magazine*.

A Wise Precaution

THE day before she was to be married the old negro servant came to her mistress and entrusted her savings in her keeping. "Why should I keep it? I thought you were going to get married," said her mistress. "So I is, Missus, but do you 'spose I'd keep all dis money in the house wid that strange nigger?"—*Success Magazine*.

A Safe Lead

"I HEAR Lem Boggs Sundayed with ye, deacon?"

"Ya-as."

"Goin' to lose yer darter, eh?"

"I reckon, but not to Lem. Zeb Higgs Mondayed, Tuesdayed, Wednesdayed and Thursdayed with us. I judge Zeb is the lucky man."—*Success Magazine*.

"DO you take this woman for better or worse?"

"I do, jedge, I do. But I hopes we kin kinder strike an average."—*Washington Herald*.

Practical Christianity

"ON BEHALF of the sewing circle of the church," said the pastor at the conclusion of the morning service, "I desire to thank the congregation for fifty-seven buttons placed in the contribution-box during the past month. If now the philanthropically-inclined donors of these objects will put half a dozen undershirts and three pairs of other strictly secular garments on the plate next Sunday morning, so that we may have something to sew those buttons on, we shall be additionally grateful."—*Harper's Weekly*.

COOK—"I'll be lavin' yer, mum."

Mistress—"Very well, Bridget. Keep to the right. Incoming cooks keep to the left."—*Harper's Bazar*.

LOUISIANA COLE (writing home)—"Mammy sure'll be pleased! She done said when I came No'th: 'You'll nebbber git no place in New Yawk, chile—an' here I'se done had six places de fust month!'—*Puck*.



THE HOUSEHOLD



The Home Canning-Factory

By Mrs. N. M. Rushing

IN CANNING I never use any acids, colorings or preservatives, consequently I always have absolutely pure products. The home canning-machines make it both profitable and possible for the farmer's wife to save the surplus vegetables during the summer, with which to supply her table during the cold winter months. Besides having the choicest of fresh canned vegetables for the family use, it enables her to market this surplus at a handsome profit when the price is high and the demand is good.

The list of fruits and vegetables that can be canned covers a wide range and includes asparagus, string beans, peas, sweet corn, sweet potatoes, beets, fruits, berries, chicken, old-fashioned lye hominy and, in fact, everything that is canned by the commercial canning-factories.

One year I purchased a good canning outfit and my daughter helped me with the work.

First in season we canned twenty-five dozen cans of strawberries, which sold for one dollar per dozen.

Next we canned eighteen dozen cans of string beans, which also sold for one dollar per dozen.

Then we canned cherries to the amount of fifty dozen cans at one dollar and fifty cents per dozen, seven dozen cans of pears at one dollar and twenty-five cents per dozen and one hundred dozen cans of tomatoes which brought one dollar per dozen.

Our best canning, however, was and has always been the canning of tomatoes.

By striving hard the first year with the assistance of a neighbor girl three days we succeeded in getting canned one hundred dozen quart cans of tomatoes.

The total sales for our first year's work amounted to \$226.75. Of course, our canning outfit was to be deducted from this, but after all expenses were paid cans and all we had the sum of one hundred and fifty dollars left for our trouble.

Bread Dainties

By Mary Foster Snider

BREAD-AND-CABBAGE CROQUETTES—Boil a small cabbage until tender in slightly salted water, then drain off all the water, chop it very fine, add an equal quantity of fine bread-crumbs, salt and white pepper to season well and bind it with one well-beaten egg. Form into little balls or rolls, fry in boiling fat, drain on unglazed paper a minute and serve very hot.

BREAD-SCALLOPS—Soak one teacupful of bread-crumbs in half a pint of milk, beat into them one large fresh egg, add half a cupful of grated cheese, a tablespoonful of melted butter and a grain or two of cayenne. Butter some patty-pans, sprinkle fine bread-crumbs over them, then put a little of the mixture in each pan and sprinkle bread-crumbs over the top. Bake for a quarter of an hour in a very hot oven and serve in the patty-pans.

BREAD-AND-SAUSAGE CAKES—Put one pound of sausages into boiling water for ten minutes, then remove their skins and mix the sausage meat with half its bulk of fine bread-crumbs, some salt and pepper, and half a cupful of tomato-catchup. Form into small flat cakes, egg and bread-crumbs them, fry them in boiling fat and drain a moment on unglazed paper. Serve them arranged on a bed of hot mashed potatoes and pass hot tomato-sauce with them.

BREAD-FRITTERS—Cut stale bread (not too dry) into slices about half an inch thick and stamp them into rounds with a cooky-cutter. Allow three tablespoonfuls of milk for each round of bread and bring the milk to a boil, add a pinch of salt, sugar to make very slightly sweet and a few drops of lemon or vanilla extract. Dip each round of bread into this, then into the yolk of an egg well beaten and fry in hot butter. Serve very hot with powdered sugar sprinkled over them.

BREAD-CRUMB PUDDING—Put one pint of milk and two tablespoonfuls of butter in a saucepan over the fire, add three tablespoonfuls of sugar and a little lemon-juice to flavor. When it boils mix in bread-crumbs until it is as thick as porridge, then turn it into a bowl to cool. When cold take out the lemon-juice and stir well into the crumb mixture two well-beaten yolks of eggs, then the whites whipped to a stiff froth. Butter a plain mold or bowl, decorate it with candied or preserved cherries and some bits of candied peel, pour gently in the crumb mixture, cover it with a plate and bake in a moderate oven for half an hour. Turn it out carefully and serve very cold with iced fruit-syrup or with whipped cream.

With Pears

By Elma Iona Locke

BAKED PEARS—Wash and dry the pears and set them in a granite baking-dish, pour over them one half cupful of sugar dissolved in one pint of hot water. Cover and bake slowly, basting often with the syrup. When perfectly done, serve with cream.

PEAR-TAPIOCA—Put one half cupful of tapioca in a double boiler with three cupfuls of cold water, cook until clear, sweeten and flavor with nutmeg. Have six or eight pears peeled, cored and quartered in a pudding-dish, pour the tapioca over them and bake until the pears are soft. Serve cold with cream.

PEAR-PUFFS—Sift one pint of flour with two teaspoonfuls of baking-powder and one half teaspoonful of salt. Add sweet milk to make a soft batter and drop in buttered cups, a spoonful in each; add a spoonful of pear sauce, then another spoonful of batter. Set the cups in a steamer and steam for twenty minutes or bake in the oven. Serve with pudding-sauce.

PEAR-DUMPLINGS (the favorite German klosse)—Peel, core and mince finely six ripe pears. Mix with them one fourth of a grated nutmeg, two ounces of butter, four well-beaten eggs, sugar to sweeten and finely-grated bread to make stiff and smooth. Mold into egg-shaped balls with the bowl of a large spoon, drop into boiling water and simmer for one half hour. When done, sprinkle with cinnamon and powdered sugar, and serve with a sweet sauce.

PEAR-FRITTERS—Make a batter with two well-beaten eggs, one teaspoonful of salt, one tablespoonful of salad oil, one half cupful of milk, one cupful of flour, one half teaspoonful of baking-powder. Beat with a Dover egg-beater until smooth and glossy. Peel and core the ripe pears and cut in slices. Sprinkle them with sugar and lemon-juice and let stand for half an hour. Then dip each slice in the batter and fry in hot butter. Or the pears may be chopped or mashed and stirred into the batter, adding a little sugar if liked, and the batter dropped by spoonfuls into deep, boiling cooking-oil and fried a delicate brown.

PEAR-DESSERT—Peel the pears, cut in halves and remove the cores. Place in an earthen dish with the cut side up, fill the core cavities with sugar and add a sprinkling of cinnamon. Add one fourth of a cupful of water to every three pears, cover closely and bake slowly for from one to three hours, the longer the better. Beat the white of an egg stiff with a tablespoonful of powdered sugar and a little flavoring, and when the pears are done, drop a spoonful of the meringue on each half pear, brown slightly and serve either hot or cold. Instead of the meringue, whipped cream may be heaped on each half pear when quite cold and served at once.

Summer Beverages

By H. F. Grinstead

Grape-nectar is made by extracting the juice of two lemons and one orange, to which is added a pint of grape-juice, a small cupful of sugar and a pint of water. Serve ice cold.

Beat a whole egg, squeeze into it the juice of a lemon and sweeten to taste, and enough water to make two glasses of lemonade. This is not only refreshing, but the beaten egg and lemon combined is nourishment to the weakest stomach.

Unfermented grape-juice is so valuable in its many uses that all who have grapes should keep some on hand. It may be preserved by heating the juice as soon as extracted to a temperature of two hundred degrees and sealing in bottles or glass jars. Boiling impairs the flavor. In case no thermometer is at hand the juice is right for sealing when it begins to simmer or steam.

Probably the most popular cooling beverage is lemonade, and by making lemon-syrup a glass may be made quickly and without the bother of hunting up the lemon-squeezer and accessories. Make a syrup of five pounds of granulated sugar; extract the juice from a dozen lemons and grate into the juice half of the rinds. When this has stood for several hours, strain into the syrup and stir well. When a glass of lemonade is wanted, use a tablespoonful of the lemon-syrup for each glass. An ounce of citric or tartaric acid will answer for half of the lemons and no one but an expert can detect the substitution.

The Home Doctor

Do not keep the soiled-clothes receptacle in the sleeping-room.

To remove warts and moles, touch them with muriate of ammonia.

Very hot water will stop dangerous bleeding if applied to a wound.

Scars can be lessened by nightly rubbing them with cocoa-butter or almond-oil.

A glass of hot water before breakfast is a laxative and tones up the system.

To prevent discoloration of a bruised spot, apply absorbent cotton soaked in olive-oil.

Yellow dock, root or leaves, steeped in vinegar will, it is said, cure the worst cases of ringworm.

Lettuce and celery should be eaten by the nervous person, as they soothe the nerves and promote rest and sleep.

A little carbolic acid added to the water in which burns, bruises and cuts are washed will greatly lessen the soreness.

Do not sleep where the light from a window shines directly on the eyes. Either sunlight or moonlight will strain the eyes.

A nursing mother should eat plenty of nuts, masticating them thoroughly, for they contain a large amount of nourishment.

To counteract poisoning, take a pint or more of olive-oil at once. Olive-oil will neutralize most vegetable or mineral poisons.

Tired feet should be bathed in warm water, to which a little salt has been added. Dry thoroughly, and rub with a little lemon-juice.

Any congestion or itching of the eyelids may be readily cured by touching them with a saturated solution of boracic acid every hour or two through the day.

To relieve sciatic pains, apply to the painful part a hot iron wrapped in flannel dipped in vinegar. It is said the iron is made magnetic by contact with the hot acid.

To relieve the pain and soreness of a bruise, hold the bruised parts in hot water, as hot as can be borne, for some time. Or apply a cloth wrung out of hot water, renewing it as soon as it begins to cool.

Every-Day Helps

When making jellies that will not "jell" easily, add a pinch of powdered alum. The result is fine.

Laundry-soap should be purchased in large quantities and exposed to the air for a while. When it hardens, the soap lasts longer than when soft.

For starching muslins, gingham and calicoes, dissolve a piece of alum the size of a hickory-nut for every pint of starch. This will keep the colors bright for a long time.

If you raise hops, by all means make yourself a hop-pillow. It is said that they are splendid for women who are troubled with headaches. With a hop-pillow under your head it is impossible not to have a happy, restful nap.

To remove paint from window-panes, rub briskly for a few minutes with baking-soda, then wash in clear water. This will remove paint if it has been on the window for years.

To butter bread-crumbs for the top of scalloped dishes, melt the butter required and stir the bread or cracker crumbs into it, adding salt and pepper to taste. The butter is more evenly divided than by the old method of putting little "dabs" of butter on the bread-crumbs and it takes less time.

One of the most difficult things about sewing on hooks and eyes is to do it so the thread does not show on the right side of the garment. If the hem where the fastenings go is narrow, slip a piece of whalebone into it, sew on the hooks and eyes and then take the whalebone out. If the hem is wider than the whalebone, cut a heavy piece of cardboard the proper width and slip that in. This is a very simple way and saves one a great deal of time in sewing.

THE WAY OUT

What to Do When Food Don't Agree

When food don't agree sensible folks make a change.

Where all others fail Grape-Nuts, being partially predigested and nearly all nourishment, succeeds usually from the first trial.

A lady in Washington says: "My baby 19 months old had never seen a well day in her life. She had suffered from indigestion from the time of her birth, and it seemed impossible to find any food to agree with her. She could keep almost nothing on her stomach and she was in such a constipated condition she suffered a great deal."

"It was then that I tried Grape-Nuts for her, steeping it thoroughly and straining it, putting a small portion in each feeding and it worked like a charm. She began to improve immediately and gained half a pound the first week."

"Baby got her indigestion from me, for my digestive organs have always been weak. I rely on Grape-Nuts for most of my food for there are times when I can eat nothing else. I am steadily improving and know Grape-Nuts will make me entirely well in time."

"I never have 'that tired feeling' any more. I eat Grape-Nuts and I feel its effects in improved mental strength very forcibly."

"There's a Reason."

Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

4 SLEEPING \$1 GARMENTS

Direct from the makers to you at less cost than you can buy the material alone. Ideal garments because they protect the child when covers become too warm and are thrown off. They cannot be worn, and are comfortable, being made in generous proportions. Good quality flannelette or fine quality of muslin—4 for \$1 your choice

Best quality of flannelette very fine muslin—a trifle heavier than above 3 for \$1

Choice of very best flannelette muslin, nainsook or long cloth 2 for \$1

Write for our complete catalogue of ladies' and children's aprons, sleeping garments, rompers, underwear, etc.

All charges prepaid and good-guaranteed as represented.

Consumers' Apron Co.,
76 Clymer Street,
Brooklyn, N. Y.

Fountain-Pen

Without Cost

Every one needs this Fountain-Pen. Farm and Fireside has obtained for its readers a wonderful Fountain-Pen. You can get one without cost.

THE Handy Fountain-Pen is the best pen made for usefulness and wearing qualities. It has a fine, well-made gold-tipped pen. It is made of vulcanite, which is like hard rubber. There is a close-fitting dust-cap to protect the pen-point. For steady use this pen can not be beaten. It is easily filled and a filler is furnished with each pen. The special feature of the Handy Pen is its free-flowing ink, requiring no shaking. You will be delighted to have so fine a fountain-pen. You will have use for it many times a day. It is the most convenient pen that any one could have. This one is guaranteed to write well.

Our Offer We will send you this wonderful fountain-pen by return mail if you will send us only four eight-month subscriptions to Farm and Fireside at 25 cents each. Tell your friends that this is a special bargain offer. You can easily get them in a few minutes. Send the subscriptions to

FARM AND FIRESIDE
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DON'T PAY TWO PRICES

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Why not buy the best when you can buy them at such low, unheard-of Factory Prices. Hoosier Stoves and Ranges are delivered for you to use in your own home 30 days free before you buy. A written guarantee with each stove backed by a Million Dollars. Our new 1911 improvements on stoves absolutely surpass anything ever produced. Send postal today for free catalog.

HOOSIER STOVE FACTORY
126 State Street, Marion, Indiana

MOTHER'S "NOTIONS"

Good for Young People to Follow

"My little grandson often comes up to show me how large the muscles of his arms are.

"He was a delicate child, but has developed into a strong, healthy boy and Postum has been the principal factor.

"I was induced to give him the Postum because of my own experience with it.

"I am sixty years old, and have been a victim of nervous dyspepsia for many years. Have tried all sorts of medicines and had treatment from many physicians, but no permanent relief came. I believe nervous dyspepsia suffer more than other sick people, as they are affected mentally as well as physically.

"I used to read the Postum advertisements in our paper. At first I gave but little attention to them, thinking it was a fraud like so many I had tried, but finally something in one of the advertisements made me conclude to try it.

"I was very particular to have it prepared strictly according to directions, and used good, rich cream. It was very nice indeed, and about bedtime I said to the members of the family that I believed I felt better. One of them laughed and said, 'That's another of mother's notions,' but the notion has not left me yet.

"I continued to improve right along after leaving off coffee and taking Postum, and now after three years' use I feel so well that I am almost young again. I know Postum was the cause of the change in my health and I cannot say too much in its favor. I wish I could persuade all nervous people to use it."

Read "The Road to Wellville," found in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

OUR YOUNG FOLKS' DEPARTMENT

CONDUCTED BY COUSIN SALLY

Mrs. Tumble-Bug and Billy Black-Ant

By Louise D. Mitchell



NE nice day last summer, little Billy Black-Ant's mother sent him on an errand. She told him that when she was returning from market that morning she had passed by a nice big Slice of Bread that Somebody in the Upper World had dropped there and that it lay beside the Gray Stone in the Path just beyond the Oak Tree. She said she had had her hands so full that she couldn't possibly carry a Crumb more so she wanted him to run back to the Place and bring home as many Crumbs as he could.

So Billy Black-Ant stopped what he was doing, like a good obedient child, and ran as fast as his many little legs would carry him, straight to the Gray Stone in the Path just beyond the Oak Tree. And there he found the Slice of Bread just as his Mother had said he would. He spent a very long time running back and forth from the Slice of Bread to his Home, carrying each tiny Crumb very carefully in his strong little jaws. And so you will not be surprised to know that after having made so many of these trips he became quite tired and really very hungry, too.

So he decided that he would sit down on the way for a few moments and rest a bit. He laid the Crumb of Bread on a nice clean Stone beside him and then sat down, fanning himself with the tip of a Blade of Grass. You would have thought it was very, very quiet there where Billy was idly resting, but Billy knew that it was not, because, you see, the Little People who live down there in the Under World hear and see things that you and I would not notice and could not possibly hear. Well, anyway, after a while, Billy began to hear a queer sound like something heavy rumbling over the Ground, so he stopped fanning himself to listen more carefully and try to discover what the Sound might be.

It came from the Big People's Road over which he had just traveled. And pretty soon he saw something so queer that he stared with all his might and main at it without trying even to guess what it might be! And no wonder he stared so hard, for there were Mr. and Mrs. Tumble-Bug with a great Ball of Mud between them rolling it over and over this way and that without even stopping to rest! Mr. Tumble-Bug was pulling the Ball forward with his Hind Legs and Mrs. Tumble-Bug was behind it pushing as hard as she could.

But when she saw Billy Black-Ant sitting there so still and staring at her in such amazement, she couldn't push another push because she began laughing so much.

"Wait a minute—wait a minute, Mr. Tumble-Bug!" she called out, and then, hearing her voice calling him, Mr. Tumble-Bug stopped pulling the Ball, got down on all of his feet and turned in astonishment to look at her.

"Wha—at is the matter?" he stammered. "It's Billy Black-Ant," she said pointing to where Billy sat beside the nice white Crumb of Bread. "Just look at his face! You'd think he was sitting there waiting for his photograph to be taken and was afraid

he might let that expression slip off his face. Ha, ha, ha!" How Mrs. Tumble-Bug did laugh!

Then Mr. Tumble-Bug saw Billy and he laughed, too. But by this time Billy began to feel embarrassed and the expression of astonishment did "slip off his face."

"What's the matter, Billy?" asked Mr. Tumble-Bug, good-naturedly, as he took out a nice, clean Handkerchief and began mopping his brow. "What has struck you?"

"Please excuse me," said Billy, getting up on his feet, "but, goodness me! Mr. Tumble-Bug, why under the Sun are you pushing and rolling about that great Ball of Earth in that way?"

"Ball of Earth!" echoed Mrs. Tumble-Bug, laughing. "Why, Billy Black-Ant, how stupid you are! That's not just a Ball of Earth, child, it is my Nursery, and Father Tumble-Bug and I were taking the Baby out for exercise!"

"What!" exclaimed Billy, with that expression all coming back to his face again. "Your Nursery! But where is the Door? How can the Baby live in there, shut up tight like that?"

"Father Tumble-Bug, I think we need a little rest, don't you? Well, then, let us sit

or it would kill him right away. He just goes sound asleep and is very happy and comfortable.

"When I have made the Cradle thus far, Father Tumble-Bug and I push it out into the Dust of the Road where the Light from the sun is very strong and warm. And we roll it back and forth and round about for quite a little while until there is a nice Dust Cover all around it and it has become hard and dry. So that is what we were doing when you first saw us."

"What are you going to do with it now?" asked Billy.

"Well, I think it is nice and hard now," said Mother Tumble-Bug, "so we are going to drop it down into the Hole, cover it over with the soil we dug out of the Hole and then go off and leave it."

"But won't the Baby die then?"

"Oh, no, no," said Mrs. Tumble-Bug, laughing, "do you think I'd leave it there if he would? No, indeed, he is going to sleep for some time. Then he will awaken and begin to eat up the inside of his Cradle-House, and pretty soon he will grow strong and older and then begin to dig his way out of the Hole, and finally become a Beetle just like we are. He is only a tiny Worm now. Isn't that a nice Story, Billy?"

"I like it all but the inside part of the House."

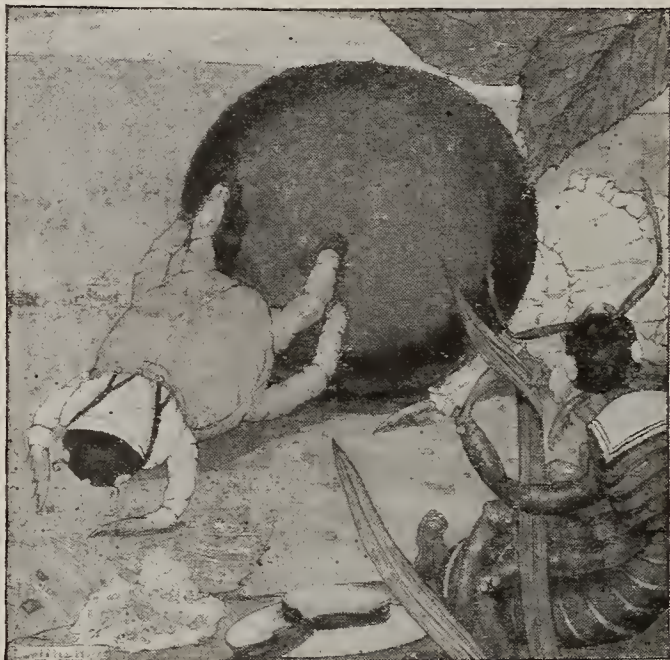
"But that's the best part of all," said Mrs. Tumble-Bug, "because the manure does what we call f-e-r-m-e-n-t, which means it kind of boils or simmers and so makes a gentle heat that keeps the Baby warm and cooks the food he finds to eat in there, and the Dust Cover keeps the heat in and protects the inside part of the Nursery."

"Well, it's a nice Story, anyway," said Billy, "and thank you for telling me about it."

"You are very welcome, my dear. Come, Father Tumble-Bug, are you ready? Well, then we'll push toward the Hole. Good-by, Billy. Give my love to your Mother."

Cousin Sally's Club

ALL boys and girls seventeen years of age and under may join Cousin Sally's Club. The club button costs only five cents. In writing state name, age and address, and direct your letter to Cousin Sally's Club, care of FARM AND FIRESIDE, 11 East 24th Street, New York City.



Mr. and Mrs. Tumble-Bug pushing a great ball of mud

down here by Billy's place and I will explain the whole thing to him this very minute."

So they all sat down by Billy's Place, and Billy found the Fan he had been using and passed it to Mrs. Tumble-Bug, who thanked him, and while she fanned herself began her Story in this way:

"You see, Billy, over there behind that Bent Stick is my Home. It's a very nice Hole dug in the Ground, and Father Tumble-Bug and I are very proud of it. The Bottom of it is where I am going to place my Nursery when it is ready to go there, but it is not ready just yet. Now, I will tell you how I make the Nursery and why I am rolling it about in this way: I first take a little manure that I find in the road and make a rough Ball of it, then I make a tiny hole in that and put the Baby in it. Then I close the hole up tight, because he musn't have any light or any air from the outside,

Cousins Wishing to Correspond

BELOW are the names of cousins who are anxious to exchange cards with some of our younger readers:

Mayme Copeland, age eleven, Waldron, Indiana; Berneice Eliot, age thirteen, 1505 West Austin Street, Nevada, Missouri; Mildred Bodey, R. F. D. 6, Box 101, Vancouver, Washington; Pearl White, R. F. D. 2, Germantown, North Carolina; Maude Lewis, age twelve, Chapin, New York; Edith Karslake, Honesdale, Pennsylvania; Minnie Paugle, Russellville, Tennessee; Carroll G. Smith, age twelve, R. D. 3, Box 96, Flint, Michigan; Edith Wersler, age ten, R. R. 2, Cassstown, Ohio; Mabel Marie Click, age eleven, R. R. 18, Box 23, Fredericksburg, Indiana; Donald Van Dyke, age thirteen, R. D. 1, Box 118, Toronto, Ohio.

GOIN' FISHING?



Then you will want this fine three-piece bamboo rod, complete with reel, line, sinkers, float and six hooks

We have selected this fine, three-piece bamboo rod, click reel, oil silk line, sinkers, float and assortment of hooks, as

A Gift to You

We particularly want you to have this bait-casting rod, and, of course, you'll want the other supplies, especially when we explain that the complete outfit will be sent without one cent of expense to you.

For particulars how to obtain this outfit, write at once to

Farm and Fireside
SPRINGFIELD, OHIO



The Dreamer

A LITTLE girl sat 'neath a tree,
Dreaming one fine day,
About the lands beyond the sea
And knights and ladies gay.

She dreamed that all the little sails
Were gleaming fairy wings,
And that the ship was laden down
With lovely deeds and things.

And as she dreamed, she knew that she
Must send some ships away,
Some gentle deeds, some tender thoughts
That would come back some day.



M. E. Grainger

Good Styles for Every-Day Wear

THE busy mother who must make one or two dresses for her daughters to wear when school opens will find two very attractive designs illustrated on this page.

For her little girl there is the pretty sailor suit shown in pattern No. 1557. Made of gingham for the warmer days and of serge for the cooler days, it will prove a most serviceable little dress. A good idea is to have the dress of plain material with trimming-bands in bright-toned plaid designs.

Then for her older daughter there is a more "grown-up" sailor suit shown in pattern No. 1500 and No. 1501. It is an extremely smart design and one that is easy to make. Made of serge, with silk collar and tie, it will be a dress that the young girl can wear not only early in the fall, but right through the winter under her heavy long coat.



No. 1557—Girl's Sailor Suit

Pattern cut for 4, 6, 8 and 10 year sizes. Material required for 8 years, five and one fourth yards of twenty-seven-inch material, with three eighths of a yard of contrasting material for the trimming and one half yard of lining for the body portion



No. 1516—Tucked Shirt-Waist With Elbow Sleeves

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and seven eighths yards of twenty-four-inch material



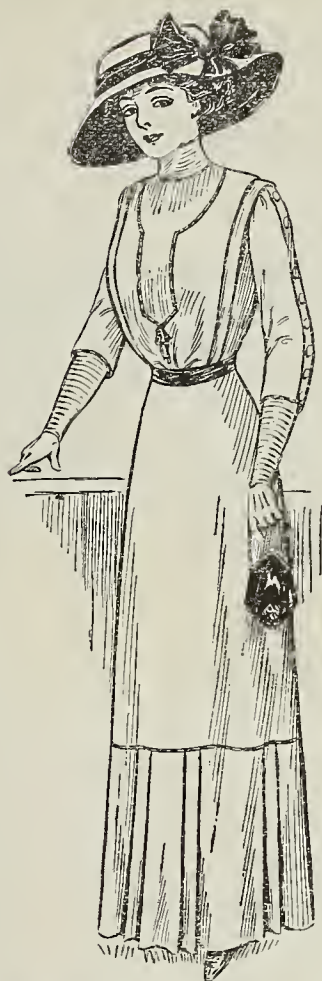
No. 1541—Negligee With Kimono Sleeves

Pattern cut for 32, 36 and 40 inch bust measures. Quantity of material required for 36 inch bust, four yards of twenty-two-inch material, or two and three fourths yards of thirty-six-inch material



No. 1506—Double Waist

Cut for 34, 36, 38 and 40 inch bust. Material required for 36 inch bust, two and seven eighths yards of twenty-two-inch material, with three and one fourth yards of twenty-two-inch material for underwaist



No. 1507—Skirt With Plaited Flounce

Cut for 24, 26, 28 and 30 inch waist. Material required for 26 inch waist, seven and one half yards of twenty-two-inch material, or five yards of thirty-six-inch material



No. 1533—Rompers With Square Collar

Pattern cut for 2, 4 and 6 year sizes. Quantity of material required for medium size, or 4 years, three and three fourths yards of twenty-seven-inch material, or two and three fourths yards of thirty-six-inch material



No. 1562—Low-Neck Russian Waist

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and one fourth yards of twenty-seven-inch material



No. 1500—Misses' Blouse Waist

Pattern cut for 12, 14 and 16 year sizes

No. 1501—Misses' Skirt With Pointed Yoke

Pattern cut for 12, 14 and 16 year sizes

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THESE are the patterns that are right in fit, right in style and right in price. For every design pictured on this page we will furnish a pattern for ten cents. We have a liberal offer to make you in regard to these patterns. Here it is: We will give one Madison Square pattern if you send us only one new subscription to FARM AND FIRESIDE for eight months at the special price of twenty-five cents. The subscription must be for some one not now a subscriber to FARM AND FIRESIDE. Send orders to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

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Back View of No. 1476

A practical wrapper for the busy housewife



No. 1476—Princess Wrapper—Seams to Shoulders

Pattern cut for 34, 36, 38, 40, 42 and 44 inch bust measures

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Next time you go to the store buy enough Uneeda Biscuit to last till next market day. "But," you say, "will they keep that long?"

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are the soda crackers that come to you protected in sealed packages, so that you *always* have fresh soda crackers no matter how many you buy or how long you keep them.

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This is the wonderful King Air-Rifle. It is a Repeater—shoots 150 times without re-loading. It is just the rifle for a Boy. Here is your chance—you can get it without cost.

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You can get one without spending a cent. FARM AND FIRESIDE will help you earn it. You would be glad to do just a little work to get it. Thousands of happy boys already have earned a rifle easily from FARM AND FIRESIDE.

A True Shooter

Boys, this rifle shoots accurately. Look out, crows and hawks, if a boy ever gets after you with this King Air-Rifle. It cultivates trueness of sight and evenness of nerve.

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Please tell me how I can get the famous King Air-Rifle without having to pay a cent for it.

Name

Address



The One Blade of Green

By Edgar L. Vincent

A LADY who is now shut up in a lonely prison in Russia, for the crime of daring to think, not long ago sent past the lines a letter to one she loved. A single sentence from that message sent back from this living death touches the heart of the one who reads it. This is what she said:

"To-day I saw from my window a single blade of grass, climbing from under a stone on the sunny side."

And how that one slender point of green, feeling about from its hard and stony covering for the sunshine, must have warmed the soul of the prisoner of fate peering through her narrow pane of glass! Think what a story of hope and cheer and encouragement it must have told to her listening ear! Just one blade of green, and yet it helped to make a gloomy life a little brighter.

One blade of green.

Life gets mixed with us all sometimes. You and I know how that is. Things out on the farm do not go as we would like them to. Our dreams seem a long time in coming true. We have put years of hard work into the place and have so little to show for it now! Once we had a glorious vision of the life that was to be, by and by, when the sunshine had touched the hills and made them to bud and blossom into beauteous things under our hands. And somehow they have not given us the flowers we had hoped—the flowers we had longed for all our lives.

So we are looking out of a prison window. But stay a moment. Is there no blade of green slipping from beneath its weight of stone? Just look about you a moment. Here are the dear ones that have been given to us. How we love them! Our very lives are twined about them. No evil has befallen them. The neighbor across the way has not been so blessed. Out yonder somewhere one of his loved ones is dreaming under the stars. Down the road there is a father and a mother who will go to bed to-night not knowing where the little girl who was once the light of their lives may be wasting herself.

These things we have never felt. Thank God, there is after all many a blade of green growing outside our window! Let's drink in their beauty and go out to stronger, braver, truer lives!

In strange ways we are sometimes brought to know the splendid things which have all along had their place in our lives and we did not see them. Have you an idea that that Russian prisoner ever would have felt the power of one blade of grass to cheer a lonely hour if she had never known the wretchedness of her dungeon

cell? Sometimes it takes shadows to help us see the sunshine.

When the frost cuts off the corn before its time, how thankful we are that the wheat all ripened so nicely and is now safe in the granary! If the waters sweep away the mill we built on its banks, is it not fine to think that we have the banks left and can put another mill there! And now it shall be a stronger and a better mill, moored so safely to the shore that no flood can ever stir it from its foundation hereafter!

A tree bears fruit that somehow is not very bright in color. It lacks the touch of the red upon its cheeks. We wonder why. Other trees drop beautiful fruit into the hands of him who watches them, fruit all glorious with yellow and crimson. We call the pale fruit of our trees to the attention of a man who knows more about fruit than we do. He goes out and sifts ashes all about the earth under the tree. Just cold, dead, gray ashes! With a spade he crushes the turf and mixes the particles of gray with the soil and we go away. In the days which come afterward we go out and look at our tree and, lo! the fruit which once seemed so sickly has taken on the red of heaven and the yellow of the sunset. Ashes did it.

So ashes come into our lives now and then to help us grow better fruit. At the moment they seem harsh, lifeless and loveless specks of sorrow; it is the by and by which tells the story.

One day, somehow, a tiny seed was dropped outside the window of that Russian prison. Who knows how it ever came there? It may have been only a bird passing over which let it fall in its flight. But it grew and in after days sent up its shoot of emerald green to cheer a lonely woman's heart.

Have you and I ever done a thing like that to make another life a bit less lonely? Just stand still now and think about that. Look where we may there are those whose lives are not just as bright and happy as they might be. We know so many of them! And it seems as if it would not take much to change it all. Just a single kindly word; only a happy hour in your presence; one little act done out of a pure heart would come to be the tuft of green creeping from under a stone to lighten the whole day.

The best of it is, too, that when we have done a thing like that we go home with a sweeter song singing in our own hearts. That is part of the return for carrying a cup of cold water in His name. We do not have to wait very long to gather up some of the joy into our own souls, and more will come to-morrow!

"Thou Shalt Not Steal"

By L. D. Stearns

It's an old, old commandment, friend. It was thundered from Mount Sinai when the earth was new—when men were reaching out for God and good and law. It has been echoing and reëchoing through the world for centuries upon centuries, until to-day it comes with no uncertain sound.

Thou shalt not steal!

The God of the ages, from the heaven of infinite love, whispers it with all its varied meanings to every soul and writes it in many ways in every heart, for there is more than one way of stealing, friend.

I was talking with a young lady some months ago, a teacher in the Sabbath-school; she would have been horrified had one hinted she was breaking the eighth commandment. She was speaking of some work she had on hand, for which she received pay by the hour, and in response to my query as to how long it would last, she replied, utterly unconscious of all that lay beneath the words, "I don't know whether I can stretch it to the end of the week or not," then she hesitated. "I'm going to," she finished, "it's got to last until Saturday night." And if her employer left the office for a minute or an hour, she immediately stopped work while she gossiped or read the paper. As a consequence she made it "last," receiving pay for many hours spent in idleness.

It's not a pretty word, but isn't it stealing, whether you're wrongfully appropriating an employer's money or his time? Doesn't it amount to the same thing in

the end? It's nothing but dishonesty.

I know a woman; she is good company—bright, attractive—but from the time she enters a house to the moment she leaves, she retails every bit of gossip she can remember; it doesn't matter whether she has any knowledge of its reliability or not.

Friend, the thief isn't alone he who steals cash. If you're taking away the good name of another, you're stealing a most sacred possession; if you're defrauding some child in your home of its birthright of love and good, sending it out into the world with no fixed idea of right and wrong, you're stealing something very precious; if you're killing in yourself the highest aspirations and powers that were implanted in your soul when God sent you into the world with a spark of Himself in your being, then you're stealing from yourself and from God!

Ah, there are many, many ways of stealing, and the God who made us, the God who holds the world in the hollow of His hand, whose love and justice are eternal, has said, without any specification or limitation, "Thou shalt not steal!"

Let's be honest in our dealings with our fellow-men, honest in our trade, in our business, in our judgment of lives and motives. Let's be honest with ourselves, with the world, with God!

"Thou shalt not steal," neither money, nor time, nor reputation, nor anything that is thy neighbor's. "Render unto Caesar the things that are Caesar's, and unto God the things that are God's."

FARM^{AND} FIRESIDE

THE NATIONAL FARM PAPER



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"Dockage"—There's Millions in It— and the
Farmers Pay. See Page Four

A Visit With the Editor

THE decadence of farming in the South after the war is charged up to the account of war, reconstruction and the shock of the change from slave labor to free labor; but whenever I spend a few days in New England or the middle Atlantic states, I am puzzled to make up my mind as to whether or not there isn't a good deal of mistake in this. To a Westerner like myself, there runs through agricultural conditions from Maine to Texas a stripe of basic sameness.

I have just come from a rejuvenated Connecticut farm—that of W. A. and A. T. Henry of Wallingford, Connecticut. W. A. Henry is perhaps our greatest authority on feeds and feeding. Ohio born, trained at Cornell and the man who nursed Wisconsin's wonderful Agricultural College in its infancy and trained it until it has become a giant. He is still Emeritus Professor of Agriculture in the faculty of the University of Wisconsin. A. T. Henry is his son and a graduate of the college his father did so much to make great. And whenever any one states the agricultural college graduate is unfitted for hard work, the attorney for the defense may well put A. T. Henry in evidence and mark him "Exhibit A." And Mrs. Henry may be cited as a proof that the city girl under the right conditions may be happy and most eminently successful as a farmer's wife.

The Henry farm is a part of the regenerative movement in New England farming. Five years ago it was an aggregation of run-down fields, such as may be seen anywhere in the hill regions—and almost anywhere else—in New England. Now it is pouring out fruit to help feed the world. They bought three hundred acres or more of stones and woods and jungle. They have handled thousands of loads of stone and made roads with them. They have grubbed and dynamited stumps. They have plowed down clover and sowed fertilizers. They have put in a hot and cold water system in their houses, and into all buildings water runs by gravity through pipes from a spring three thousand feet away. This has meant terrific work—but it is beginning to pay.

It has resulted in the reinstatement of some old-fashioned Connecticut houses in the status of a real home, and where the old stone fences lay in the forest, which had grown up where once were fields, are fields again. Something like seventy-five acres of peach-trees stand—lovely green globes of foliage—with apple-trees modestly hiding among them ready, when age or the yellows take their shorter-lived sisters, to come in and become a more permanent orchard. Carman, Waddell, Elberta, Belle of Georgia, Hiley and others stood loaded with fruit as we went through, and the Greensboroughs were in process of picking. The latter went to Waterbury, fourteen miles off, in carefully filled baskets, classified into "firsts," "seconds" and "softs," the sorting being done in a packing-shed presided over by Mrs. Henry—and every basket was as good at the bottom as at the top. So they were getting something like a dollar a basket for them in competition with Southern peaches.

Success in fruit-growing is for those who are willing to wait and take pains while waiting. That is why so many of us have no fruit. The Henry farm appears to be about ready to repay richly the long waiting, the infinite pains, and the scientific planning mixed with capital and hard work which have been expended upon it. There are acres and acres of peach-trees too young to bear, and other acres of cherries, pears and quinces—and there is that army of thrifty apple-trees—the host of reserves—which will make this bit of redeemed New England a permanent outpost of the New England Army of Agricultural Reoccupation.

* * *

And this brings me back to my first thought—the basic thing which wrought ruin to the farming industry of the whole Appalachian and Atlantic coast belt—North as well as South. Everywhere one finds conditions strikingly similar. Professor Henry's farm consists of a score of fields which once fed, with both grass and grain, cattle, hogs and sheep. He has a beautiful wood-lot in which a sawmill might work for a year, through which, among the big trees, one can trace the ridges made by cultivation in that old time when New England was a farming country. There is something sad in the experiences one has in exploring these forests. One drives through a road overarched by boughs which looks like a tote-road in a pinery; but on each side runs the stone fence, like the ruins of some former civilization, pushed over here and there by the growing trees—the fence which once marked the roadside limits of cultivation. This lumber-jack's trail was once the king's highway, a glade grown up with dogwood, sumac, witch-hazel and sassafras, or matted with sweet fern. Remote in the woods, where the hermit thrush now sings, one finds a cluster of lilacs, a patch of corn lilies or "bouncing Bets" run wild and a moldering chimney or line of foundation-stones bearing mute witness to the fact that here was once a home, where woman loved "laylocks" and lilies, and children were born and human destinies wrought out. And it is all gone back, all overgrown with ivy and thorn and brier. Man stripped

off the coverlet for a moment of a hundred years or so, and Mother Nature, finding him gone away one day, silently and softly spread it back—her soft green coverlet of protecting verdure. This is New England.

On my West Virginia farm, where I am trying in a smaller way to do what the Henrys are doing so well, the situation is the same. On my two hundred acres are the ruins of four homes, and I shall cut sawlogs where crops were grown before the war. But the abandonment of the farms was not owing to the war—for there were few military operations here—nor to the change from slavery, for, though it was slave territory, I can not learn that much farming was done by negroes. Yet the agriculture of these hills declined.

It is so all over much of the South. I have passed scores of deserted plantations in the pine woods of Alabama and other Southern states.

I may be wrong, but it seems to me that this whole phenomenon of abandoned farms arose from general causes intensified here and there by local conditions. Exhausted fertility was one cause and lack of knowledge as to how to keep fertility up. It was a period of hard times for farmers all over the world, and I feel sure that these world-wide business causes had something to do with it.

But in the main I feel sure that the stony, hilly and stumpy lands of the East and South went back to trees because of the invention of plows, reapers, mowers and other farming machinery which could not well be used on them, the opening up at the same time of the West, with its virgin soil, its smooth surface and its rich loams without stone, so splendidly adapted to labor-saving machines, and the simultaneous development of towns and town life.

We of the West had advantages which simply drove the hill farmers to the wall. This combination of circumstances may not account for the whole phenomenon—it may not account for all the decline in cotton-planting, for instance—but it does seem to account for most of it.

But the advantage of the West was only temporary. Already the

tide of cultivation is running back to the old water-marks. I saw the plowing by Mr. Henry of a dreadful patch of stones, stumps and briars by means of a riding plow built to stand the grief which drove our fathers from the plow-handles or to Iowa. Dynamite and mechanical stump-pullers make easier work of rocks and stumps. Scientific agriculture tells us the story of the buried treasure in the abandoned farms. The East has the markets, the cities, the trolley lines, the traditions, the beauty and the soil to make it agriculturally great again.

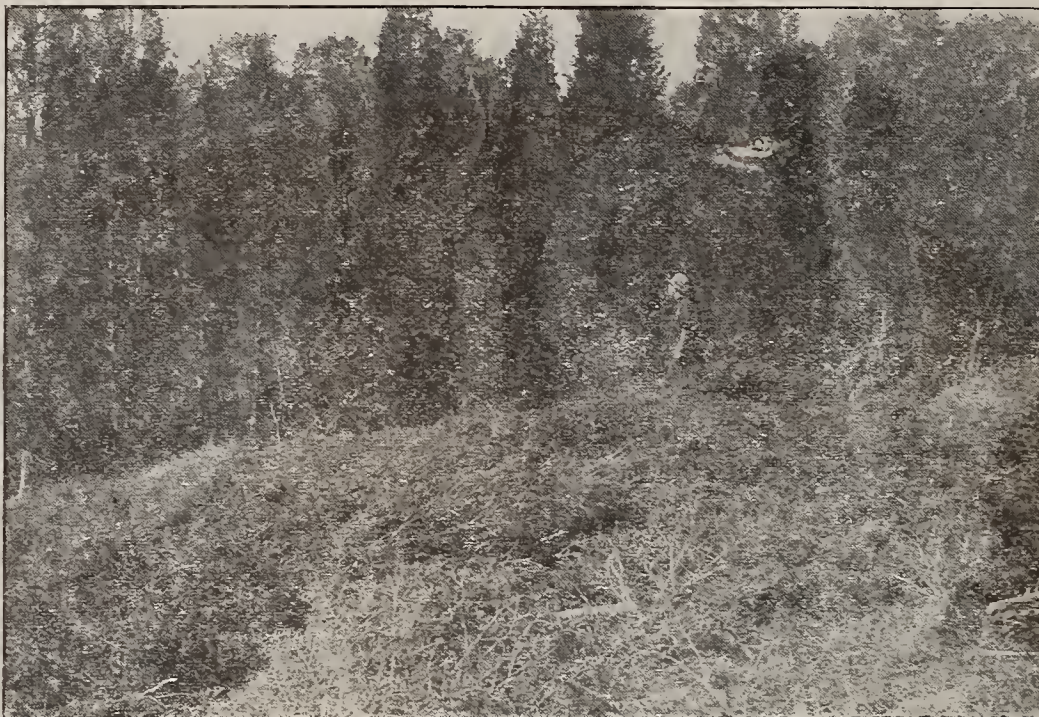
Not that it will ever be the sort of farming country it was sixty years ago. It must go on to other things. And in their capacity to go on to other things will be found the test of the New England farmer. Here and there one finds men of the fine old Yankee stock rising to the emergency and making good in poultry, fruit-growing or dairying, along progressive lines. But alongside them will be seen families of the same wonderful breed whose ancestors for generations have lived in the old white house under the elms, but who are losing their grip and degenerating. Progress is a splendid thing, but it is also to some a dreadful thing; for it is a car of Juggernaut crushing those under its wheels. The place to be is on the car, not under it. Farmers of New England, climb on!

The old New England elms are dying. A beetle is stripping them of their leaves year by year and the magnificent old giants are giving up the struggle by hundreds, after centuries of green and thrifty life. Some of the old New England yeomanry are dying in the same way.

The land of any region will find its way into the hands which can make the best use of it, except where land monopoly prevents. And even land monopoly can not always keep labor out of its own. The land of New England will finally find its way into the hands, first of the New England farmers who rise to the level of the best farming; second, into the hands of the rich of the cities who may or may not make the best use of it, but who really need it; third, into the hands of Western men and city men of means who have the enterprise and capital and ability to make the best use of it, and, fourth, into the hands of the industrious Canadian, French, Italian, German and other foreigners who will do for it what they always do to the fields they till—make them fruitful.

What will become of the New England farmers who fail to adapt themselves to the newer ways? Well, let us hope that those who so fail will be few. As for those few, their descendants will work in the service of the Italians, Germans and other incomers. The land will gravitate to the hands that can best use it. Be sure of that, whether you live in the East, the Middle West, the Far West or the South.

Robert S. Squire



Clearing Reforested Land for the Henry Orchard
This picture shows the condition of the gone-back lands in New England. It was once good farming land. In 1905 it was in the condition shown. Now it is bearing fine crops of peaches.



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The Colt's Kindergarten Training

By David Buffum

OUR care in the development of the colt should begin before he is foaled. His dam should be generously fed, have a comfortable stable (a box stall whenever practicable) and plenty of exercise. The work to which she is put, whether on the farm or the road, should be as regular as possible. It should not be unduly severe, however, nor too long continued at a time. If she has to pull a load, care should be taken to have her harnessed properly, so that the traces, pole or shaft do not press too much against her sides. But any inconvenience that this may involve should not prevent her being used; exercise is essential and, if properly safeguarded, will cause no bad results. Often my own mares have been used almost to the very day of foaling.

But, after foaling, the best thing for both mare and foal is to cease work and turn them out in some good pasture where there is water. The mare will give more milk and the foal will do better in this way than any other—so much better, in fact, that nothing but necessity should ever prevent its being done. If it is really necessary to use the mare, however, a roomy box stall should be provided where the colt may remain during his dam's absence. And this box stall should not be a ramshackle affair that the colt will try to get out of or in which he can get tangled up in any way. It should be strong and the sides both smooth and high. If two colts are being raised at the same time, both can be confined in the same stall. They will be quieter and better contented—and therefore will do better—than one alone.

If the mare is worked, she should be generously fed—and even if she is not, it often pays to give her some grain. If she is not bred again and is running in pasture, she may do very well and give plenty of milk on grass alone, provided, of course, that the grass is abundant and of good quality. But if, as is commonly done, she is immediately bred again, the feeding is of increased importance and should never be neglected when it seems to be needed, for she is performing the double duty of feeding the foal at her side and the foal she is carrying.

It is an excellent plan to give the mare her oats in such a way that the colt can get his nose into the manger. In this way he will soon learn to eat with her. The foolish business of "teaching him to eat" will be done away with and he will be in better shape for weaning when the time comes for it.

In this latter operation I need hardly say that separating the mare and colt by the length of a stable or the area of a barn-yard, where, though out of each other's sight, they can still hear and recognize each other's voices, is, of all ways, the worst. It is an unhorseman-like performance and subjects both mare and colt to a great deal of needless uneasiness and worry. The way commonly followed by good horsemen is to place them at once so far apart that they can not, by any possibility, hear each other's cries. On a great many farms, however, either from lack of suitable buildings or some other reason, this is not practicable. A method that I have found very satisfactory in a great many cases is to use the mare frequently during the last week or so that the colt is with her, leaving him at home, so as to gradually accustom them both to separation. Then I wean by putting the colt in a box stall immediately adjoining the mare's, where he can see her and even touch noses with her through the bars. In this way, though prevented from sucking, he still has her companionship; neither is exactly suited with the situation, but they find it at least tolerable and they very soon become accustomed to it and entirely contented. With the drying up of the mare's milk and her continued use in harness, which keeps her much away from the colt, she soon loses her interest in him and he can then be removed to some distant pasture with very little protest on his part or hers.

The care and common sense that should be observed in weaning should be continued afterward; and at the risk of being accused of repetition, I may say here that in raising horses, far more than in any other stock,

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constant care and watchfulness are necessary. Colts should not run in pasture with older stock, but be turned into a field by themselves. Where only one colt is being raised, this is not always practicable; but he can, at least, be turned out with only one or two horses, with whom he is well acquainted, and thus the danger of his getting hurt be greatly lessened. As a rule, horses are not very inimical to a young colt, even when he is new to them; more often they are friendly and disposed to play with the youngster. But horse play is proverbially rough play and, with companions so much older and stronger than himself, he is exceedingly liable to get hurt.

In wintering the colt it is not wise to feed very much corn; oats and bran are the right grains to use. A little corn-meal mixed with the bran, however, helps to keep the colt in order and does no harm. From weaning-time and during the first winter I have had the best success in feeding oats; and the two winters following, oats in the morning and a supper of bran, with a little corn-meal added. It is hard to give any fixed rule as to quantity, as much depends upon the quality of the hay (of which the colt should have all he wants) and also what object the breeder has in view. If his aim is to sell the colt at an early age—say as a yearling or two-year-old—a very liberal grain ration will, of course, make the colt larger and smoother at that age. But inordinate feeding, even if of so good a grain as oats, is not natural and under ordinary circumstances is unwise.

The operation of castration is best performed when the colt is about one year old. I have frequently been asked what is the best method. I am rather reluctant to reply to this query because in different parts of the country different methods are in vogue, and—assuming, of course, that the method is one of the approved ones that are practised by reputable veterinary surgeons—it

to some use—say three or four years old, though his strength should not be taxed very severely until he is five—he should be accustomed to his work gradually and, as he is still in the formative stage, the tasks to which he is set should be chosen with regard to the good they will do him rather than his owner. In this connection one of the best things in the world for a colt is light work on a farm. It tends, more than anything else does, to make him gentle; for the colt that is accustomed to the swinging and rattling of the plow whiffletrees around his heels is not so likely to be ticklish around his hind parts if anything happens when in carriage.

A year or two ago, as I was driving down a long hill with a pair of four-year-old colts, the carriage pole, which was new and had an unsuspected flaw in it, snapped in two in the middle and the carriage ran into their heels. Though, naturally, they were a little alarmed, they made no fuss about it, but stood quietly while I checked the wheels and got them clear of the wreckage. These colts had been used in plowing old ground and also in harrowing, though I gave them very little of the latter on account of its greater severity. There is a notion, sufficiently prevalent, that carriage or trotting stock ought not to be set to these humble tasks, but should have all their training and exercise on the road. I have never hesitated to put my most finely-bred carriage colts to farm work, indeed have sometimes gone to considerable inconvenience to do so.

Of course, judgment must be used. I have rarely kept a colt (unless of draft stock) at the plow more than two or three hours and at the harrow a still shorter time. The main thing, as already stated, is not the work we get out of him, but the steadying and civilizing effect that it has upon him.

In the matter of stabling I shall mention only the points of most importance. For its chief requisites the stable should be light, warm and dry, with means for extra ventilation when needed. All these features can be had in any ordinary barn and do not necessitate much expense; for costly stable appointments do not add to the comfort of the horse and are always a secondary consideration. It is exceedingly desirable to have box stalls if space will permit. Indeed, so highly do I value them that in many instances I have had them built at the expense of space that was needed for other things. Of course, horses can be kept successfully in standing stalls, but box stalls are to be preferred when they can be had.

The box stall should be ten feet square and may be built with or without a floor, as is most convenient. In either case, its bottom should be filled to the depth of from four to six inches with fine gravel or coarse sand, which should be replenished from time to time, and above this a layer of straw or other litter.

The standing stall, on the other hand, should always have a floor. I know that some very good authorities recommend an earth floor, rather than a wooden one,

as being easier to stand on and furnishing needed moisture for the feet, and, theoretically, this is all right. But in actual practice the horse invariably wears out and paws away a hollow place where his fore feet stand and his hind feet are almost certain to be much of the time in a quagmire of dung.

A millionaire, who had just purchased a farm and had asked me some advice about his stables, took exception to my recommendation that the standing stalls have floors. "Floors were wrong in principle," he said, "and so must be wrong in practice;" and he had his stalls built without them. In less than a month from the time they were first used they were in such condition that he was obliged to have floors put in. The same thing has doubtless happened in many other instances and simply goes to show that a thing may be absolutely right in theory and yet not work out well in practice.

I have used both standing and box stalls all my life, and on most farms it will be generally most

[CONCLUDED ON PAGE 4]



"The best thing for both mare and colt is to . . . turn them out in some good pasture"

is usually better to follow the custom of the locality. This much, however, can be said that the operation should always be performed by a skilled veterinary surgeon or by some one who has had sufficient experience to work skilfully and to know exactly what he is about. I am not saying that there is not a choice in the different methods, for I think there is. But the operator is more likely to succeed in doing a thing as he has always done it and seen it done than in some way that is new to him.

Following castration the colt should be kept in a roomy box stall at night and turned out in a good pasture every day—for grass is the very best medicine for him during his recovery. He should not be out in the rain, however, nor in chilly weather, and every morning and night he should have a feed of oats and bran. This care and attention should continue till the inflammation of the parts has subsided and the wound entirely healed.

The details of breaking the colt to harness have been given in another paper. When he is old enough to put

Dockage—A Trick of the Grain Trade

Systematized Petty Larceny That Takes Millions From Farmers—By G. C. Streeter

THE system of petty stealing that goes under the name of "dockage" comes as near to sneak thievery as anything I can imagine, yet it is the common, current, universal practice of the grain trade. You have submitted to it for years, most of you, without a word of protest. I presume there are some of you who would think you were badly treated if you sold your grain without being swindled on the dockage.

The form of the practice that I describe may not be the one common to your section. There are various means of working it in different localities.

The commonest dockage is dockage on weight. The general practice throughout the Northwest is to dock the weight of each wagon-load of grain ten pounds—that is, the farmer is paid for ten pounds less grain than he actually delivers.

If you are unreasonable enough to ask the reason for this, you are told that it is "to make the weights hold out"—to enable the line elevator to ship out as much grain as they weigh in—to make up for the differences that there may be between the scales at the line elevators and the scales at the terminal elevators. Perhaps some of you farmers have been able to figure out a reason why you should compensate the grain-dealer for having inaccurate scales, but I am too stupid to see it.

In twelve million loads of wheat, ten pounds to the load means one hundred and twenty million pounds, or two million bushels, and at eighty cents a bushel it means one million six hundred thousand dollars—a sum that would buy quite a few books and dish-washers and sewing-machines and neck-ribbons and leather belts, but really too small a sum to write about in this connection—for this is just the initial step in the dockage swindle.

Indistinguishable From a Hold-Up

If you ship a car-load of grain direct to a Northwestern market, you are docked thirty pounds on every car-load by the terminal elevator.

The grain is there in the hopper weighed by a supposedly accurate scale, yet you are paid for thirty pounds less grain than you deliver. I don't know what you call it, but to me it seems like robbery. It is only a half bushel—too little to raise a row about—but on 250,000 cars of grain annually received into terminal elevators in Minnesota alone that means 125,000 bushels—a profit to the terminal elevators of over \$150,000 per year at present prices.

You who are car-load shippers and you who ship through Farmers' Cooperative Elevators all contribute your mite to this sum.

In Kansas City it is the practice for the terminal elevators to confiscate one hundred pounds from each car of grain. Mr. E. J. Smiley, Secretary of the Kansas Grain Dealers' Association, testified at a hearing of the Interstate Commerce Commission: "I know it is a practice for the elevators located in Kansas City to deduct one hundred pounds from each car. . . . I can testify that there is a difference of one hundred pounds in the account sales and the certificate of weight." T. R. Radford, Chief Grain Inspector of the State at Kansas City, similarly testified. This evidence is unchallenged.

Next the grain-buyer looks over your grain and decides that you must be docked from one to six pounds to the bushel on account of the chaff, weed-seed, barley, oats and other things that are mixed with the grain. After haggling, perhaps, you agree upon the amount of dockage you are willing to accept. Your wheat is then dumped into a pit and elevated through a boot to the weighing scale. There is a suction fan at the foot of the boot and another one at the top of the elevator shaft, which takes out all of the chaff, dirt, light seed, foreign grain and in many cases some of the light-weight wheat. When the grain reaches the weighing scale, it is clean grain, the screenings, dust, oats, flax and other foreign grain or seed having passed unweighed into another elevator bin. The grain is then weighed and from the weight of the clean grain is deducted the amount of dockage agreed upon. In other words, the elevator, by the forced draft suction, takes out all of the dockage on the way up to the weighing scale and then arbitrarily deducts it a second time—one of the most deliberate swindles that could be perpetrated anywhere.

I know that the average reader would hesitate to accept my unsupported statement that this system is in practice, so let me corroborate what I have said. The report of the committee of the North

Dakota Bankers' Association, submitted to the association on November 24, 1906, makes this statement:

"During the process of elevation, all grain is subjected to a suction draft in order (they say) to keep the building free from dust(?). This is an injustice to the shipper as in our judgment all grain should be weighed immediately upon being unloaded and nothing should be taken from it before it is weighed. The amount of light grain and dirt taken out under the present method simply depends upon the force of the suction draft. We find that all the dockage and screenings taken from the grain have an actual value and believe the shipper should receive this value. The matter of dockage is one that could so easily be remedied, and the shipper given the benefit of the screenings actually taken from his grain, that the wonder is the present unjust custom of not only confiscating the screenings, but, in addition, compelling the shipper to pay the freight on that to the terminal point has been allowed to prevail so long."

The Evidence is Unquestionable

W. C. Macfadden, the Secretary of The North Dakota Bankers' Association, in his testimony before a Senate Committee in 1909, stated:

"To my own knowledge and by actual experience, it is absolutely impossible to load wheat out of an elevator and unload it into another in Duluth, Minnesota, and Superior without a loss of from one to three bushels, which can easily be accounted for by the fact that this suction blast is in force all the time the grain is being elevated into the weighing bin and that whatever is taken out by the suction blast is taken out before the grain is weighed."

Let me also quote some additional testimony developed at the same hearings:

Mr. Beall. "The same thing applies at the terminal. The dock is made and the grain is weighed, and this dirt is taken out in the meantime. The grain is weighed and the dirt is taken off the net grain after it has been cleaned, so that it has been docked twice; and then the elevator man, after he goes through that process, turns right around and puts the screenings right back into the wheat again and ships it out."

Senator Long. "Do you mean that all of them do that, or it is done in some instances?"

Mr. Beall. "That is the system. They all do it."

Senator Long. "They do that under the rules or with the approval of the board of trade?"

Mr. Macfadden. "Yes, sir; they do that under the rules of the board of trade."

Senator Perkins. "Why should not this chaff and cheat and hay-seed that is in the grain be given to the owner of it?"

Mr. Macfadden. "That is just the point we make, and is what we believe would be done if the inspection was made under federal supervision."

It may interest you to know what the elevators do with the screenings. Senator Dolliver of Iowa, in his report from the Committee on Agriculture and Forestry to the United States Senate, stated:

"That which is removed is again cleaned. The worst portions are again sold for eight dollars per ton and the balance, called 'screenings,' is surreptitiously loaded from the elevator into the middle of the cars of higher grade grain."

The report of the Committee of the Bankers' Association of North Dakota says: "Even the fine dust collected by the dust-collectors is sold for nine dollars per ton to firms using it in the manufacture of stock-food."

The Game in Minnesota

In another place the same report states: "We found that all the screenings are carefully cleaned there and all good grain taken out, and that the good grain taken from the screenings is shipped as screenings in order to avoid inspection and appearing in the amount of grain shipped out of the elevator."

Let me also quote from the report of one of the inspectors of the Department of Agriculture who investigated conditions in Minnesota. He says:

"The following methods have been and still are used:

"(1) Dockage by the Minnesota inspectors of from one to three pounds per bushel on all grain inspected 'in.'

"(2) This grain on being elevated and before being weighed is subjected to a cleaning process by means of suction fans at the foot and at the top of the elevator shaft, which practically removes all for-

eign material and leaves the grain clean.

"(3) The grain after being thus cleaned is weighed and the dockage, estimated before it was cleaned, is then deducted, the cleaned grain thus secured being appropriated by the elevator handling the grain.

"(4) An arbitrary dockage of thirty pounds on every car-load for possible variation of scales—that is for each draft of one thousand bushels on the scales, the weight is read and recorded as thirty pounds less than the weight actually registered by the scales.

"(5) Stealing grain by means of small pipes inserted in the chutes through which the grain is passing after being weighed—that is, for every draft of one thousand bushels of grain weighed into or out of an elevator a portion of it finds its way through a tube leading to a private bin, so that less than one thousand bushels actually reaches the public bin or vessel.

"(6) The selling of screenings and other foreign material obtained during the process of the preliminary cleaning. It is alleged that this material is run through pipes into the chutes leading to the hold of the vessel being loaded.

"As the exact amount of grain going into the elevators is a matter of public record in the registrar's office, only the same amount of grain can be reported as being delivered therefrom. In order, therefore, to dispose of the surplus grain realized from the methods mentioned above without exciting suspicion, the elevators sell their grain by sample, without inspection, and report it as screenings.

"Mr. A. N. Lent, Secretary of the Superior Board of Trade, stated that in straightening out a set of books for the owner of a small elevator a year or two ago he ascertained that in handling about 1,000,000 bushels in a single year a surplus of over 125,000 bushels of good, clean grain was left after accounting for all grain received into the elevator.

"In company with Mr. A. H. Johnson, of Superior, I was shown the mechanism for cleaning grain before it is weighed at one elevator in Superior, Wisconsin. This mechanism is simply a galvanized iron tubing, six or eight inches in diameter, running from the bottom of the elevator shaft to the top, with a suction fan at each end. As the grain on the elevator belt passes from the receiving pit at the bottom it is subjected to a strong current of air which removes a portion of the lighter material. When the grain leaves the elevating belt at the top and is falling to the receiving bin above the scale hopper, it is again met by a strong current of air which more or less effectually removes the remaining foreign material, so that the grain is practically cleaned when it reaches the receiving bin before it is weighed. The foreign material sucked out of the grain at the top passes through the metal tube to a bin at the bottom of the elevator. The tube in question is situated directly behind the elevator shaft and would not be noticed by any one whose attention had not first been called to it or who did not know its purpose. I was told that all the elevators in Superior were equipped with this device, but did not have sufficient time to verify the statement by personal inspection. I was further informed that all the elevators in Superior are 'private' elevators and do not court inspection."

How the Little Larcenies Count Up

The annual report of the Chief Grain Inspector of Minnesota for the year 1905 shows that the dockage per bushel on wheat ran as high as four pounds on 2,780 cars, and that the average dockage on 109,160 cars of spring wheat in the state was 18.6 ounces per bushel. Applying this average to the 28,857,754 bushels weighed at Duluth-Superior would give a total dockage of 33,547,139 pounds, equal to 559,119 bushels of sixty pounds each.

Adding to this deduction of thirty pounds per car-load for variation in scales on the 29,986 car-loads of wheat weighed at Duluth-Superior in 1905, amounting to 14,993 bushels, gives a total of 574,112 bushels of good clean wheat realized by the elevators at Duluth-Superior during 1905. At ninety cents per bushel, which was about the average price of wheat during the fall of 1905 and the spring of 1906, as reported by the Duluth Board of Trade, the elevators realized from this source alone a profit of \$516,700. It seems probable that by applying the same methods to other grains their annual profit would be at least \$1,000,000.

Senator Dolliver, in his report, says: "Under the present system, while the

producer receives nothing for the screenings and dockage mentioned, both are taken from his grain. . . . The consumer is compelled to pay for these screenings which are mixed with the grain which he buys at the full price of high-grade grain."

In the year 1906 the dockage on wheat inspected in Minnesota at terminal elevators averaged twenty-seven ounces per bushel, or a total of something over 3,000,000 bushels. As practically all of this is wrongly taken out in going up the elevator, it is all profit to the elevators. Three million bushels at eighty cents a bushel would amount to \$2,400,000—all stolen profit.

The statement of 647 line elevators in the state of Minnesota for the crop year ending June 30, 1907, showed that on 12,982,950 bushels of wheat received there was 546,000 bushels dockage—an average of forty-two and two thirds ounces per bushel; over \$400,000 worth of grain taken by the elevators without excuse or justification.

If the same average holds good for the United States, it means upward of 16,000,000 bushels of wheat of an aggregate value at present prices of more than \$12,000,000—a rather substantial sum total for petty larceny.

This system will continue until farmers unite, and by the strength inherent in cooperative organization, and by laws regulating the grain business, overthrow this monopoly and its evil practices.

The Colt's Kindergarten Training

[CONTINUED FROM PAGE 3]

convenient to have both. The special desirability of the box stall is for growing colts and for horses that are not used regularly. For horses that are used every day the standing stall is certainly more convenient and serves every purpose.

In feeding, no rule can be laid down as to quantity. This must be according to circumstances and the judgment of the feeder. The kind, however, should vary according to what the horse is doing, and it may be of benefit to the reader to know the feeds that I have found most useful under different conditions.

(1) If a horse is doing excessively hard work, whether fast or slow, feed oats (a heavy ration) and no other grain. If he can rest on Sunday, give him on Saturday evening a bran-mash instead of his oats.

(2) If a horse is standing idle a great deal of the time, feed him little or no oats or whole corn, but feed bran, with a little corn-meal mixed with it—one part of corn-meal to two or three of bran, according to conditions.

(3) For old horses, especially if out of condition, feed corn-meal, bran and molasses.

(4) For horses used under all ordinary conditions feed corn in the morning, oats at noon and oats at night.

For forage good, sweet hay must be the main dependence. If it is only sweet and nicely cured, I have never been able to discover that its coarseness, or fineness made the slightest difference. Hay that is mowed rather late—say, just as it is going out of bloom—is better for horses than that which is mowed earlier.

Good, bright corn-fodder, run through a cutting-machine also makes a fine forage feed for horses equal, under right conditions, to the best hay and often better relished. Fodder containing smut, however, should never be fed to horses. In parts of the Southern states the leaves are stripped from the stalk and cured by themselves. As this fodder contains no ears, it is, of course, always entirely free from smut and, as a forage feed for horses, it has no superior.

In this and the foregoing chapters I have endeavored to tell the reader, as best I could, the things that I consider most important to know in the management and handling of horses. In treating the matter so briefly there must, of necessity, be many minor points left uncovered; but I trust that in the consideration of the larger, the key to the smaller will be found. For I have always felt that what the student of horsemanship most needs is not information in its minor details so much as an insight into its general laws and principles. With a knowledge of these, the details are easily mastered.

Headwork Winners, July 25th

E. H. Hazel - "A Self-Closing Gate."

C. R. Bashore - "A Handy Wheeled Sled."

Paul R. Strain - "The Stop That Suits."

Around the Farm

Items of Interest and Value to the Progressive Farmer

A Boy, An Auto and An Idea

IN IOWA there is a farmer's son who has an idea and an automobile.

His name is Ben Mitchell, and he lives in Shenandoah, in Fremont County.

Now, for the idea—I was visiting Iowa, and Ben Mitchell drove me around in his automobile all one day. Stopping at his home for dinner—and what a dinner Ben's mother cooked! What's the use of trying to describe it to FARM AND FIRESIDE readers? You all have your own brand of the same. But for me, I just had to let out my belt two holes.

Well, Ben asked me if I had noticed that the roads near their house were better than the average, and upon my saying "Yes," he gave me his idea as follows:

"You see, now that we have an automobile ourselves, we notice whether the roads are good or bad, and as the average around here is not very good, I felt it was up to me to have the roads near our house in as good shape as possible. So (here is the idea) every time I go to the field to work I hook up a pair of horses to a road-drag and carefully drag the roads as far as the field. Then when dinner-time comes near, I again put the horses to the drag and drag the road all the way back.

"By keeping up this habit the roads for a certain distance in all directions are kept in pretty fair shape." And they certainly were.

Now that is a great idea, born because of automobile ownership, and we commend it to all our readers, whether they own automobiles or not—but you will find a good automobile a profitable investment and the upkeep is surprisingly cheap.

Make a King "split-log" road drag and give Ben Mitchell's idea a trial.

If Fremont County is wise it will soon have Ben Mitchell for County Road Supervisor, and perhaps if you carefully read your FARM AND FIRESIDE a year or more from now you will find a notice that they have a new road commissioner in Fremont County, Iowa, "Quien Sabe."

One thing further about young Mitchell. He found an old gas-engine lying around the barn doing no work.

Taking the engine, some wheels from an old harvester and various other odds and ends, he made the tractor shown in the accompanying illustration.

With this they draw heavy loads, plow, saw wood, grind feed, etc.

If you have a boy, let him, encourage him to, think and tinker. He may work out a big idea, probably will.

G. HERBERT POTTER.

Candied Honey

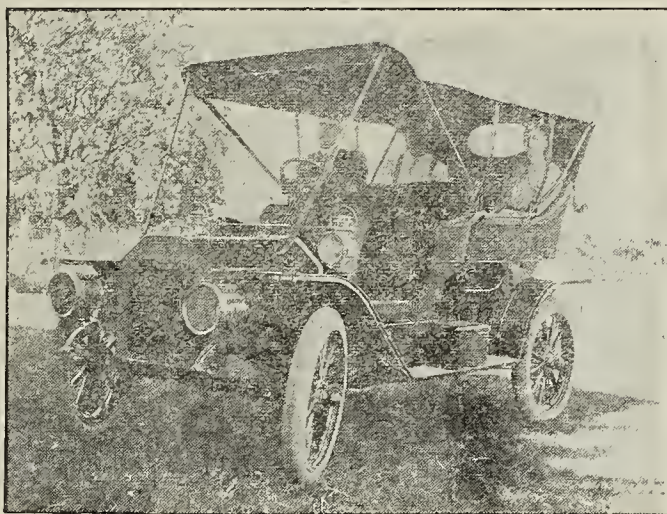
UPON the approach of cold weather most extracted (liquid) honey will turn cloudy and in time change to a semi-solid state resembling lard in texture. To bee-keepers this is known as "candying." As the honey assumes this state, many consumers are suspicious of adulteration. Their idea is that sugar-syrup has been added, for there are small kernels or grains resembling granulated sugar. The truth really is that adulterated honey is less inclined to "candy" than the pure article, so that, in a sense, candying is an indication of purity.

As candied honey is not yet well understood, it is generally disliked by consumers. This is to be regretted, for to keep it liquid and relquify it makes extra work for the bee-keepers. If only to save this extra work, one should educate the home market to take honey in the granulated form.

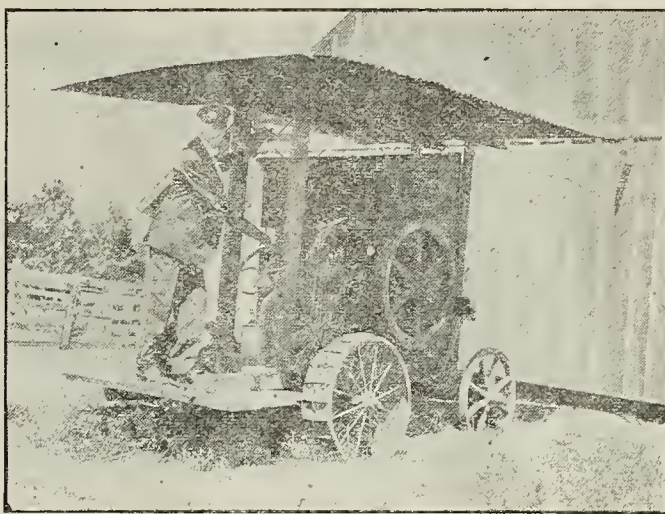
Cheaper retail packages can be used if honey is sold in the candied form. Lard-pails are, perhaps, cheapest where the goods are sold direct to consumers. The honey is run in before it has candied and then the pails are kept in a cool place to hasten the solidification.

As some might want to relquify the honey themselves, I distribute leaflets to my customers explaining how it is to be done.

Not all kinds of honey candy solid. When this is the case, though, it is possible to paraffin strong paper sacks and sell the candied honey in these. I don't think a cheaper package will ever be found, and it's all right, too, if, as already



The Boy and the Auto



Another of His Ideas

noted, the honey is of the kind that candies solid. The packages are then almost as easily handled as bricks. Paper sacks specially made for the purpose are sold by bee-supply dealers.

The sacks should be filled when the honey is just liquid enough to run slowly. Don't wait until it is about solid and then try to put it into sacks. You would make a poor job of it.

Another thing—don't try to use sacks before being certain that your particular honey will candy solid.

Have directions on the package telling how to liquify the honey.

Though it is more profitable to sell honey in the candied form if the price is the same, many consumers will not use it, and it is necessary to sell extracted honey in its natural liquid state. It is necessary then to guard against its candying after it leaves your hands.

Some have (according to their "say so") attained this by putting glycerin or some other chemical into the honey to keep it liquid. I don't like this, especially as, if one does not "look a little out," one is liable to come in conflict with pure-food authorities.

The almost universal way of insuring honey against candying is to heat it and seal while hot—but never have it hotter than one hundred and fifty degrees Fahrenheit, for too high a temperature makes the honey taste burnt. A good way is to put the can of honey to be heated into another receptacle, as a wash-boiler, filled with water. When the water becomes too hot, pull the whole outfit to the stove edge. If a thermometer is used, be sure it is reliable at high temperature. F. A. STROSCHEN.

Things We Have Quit

WE ARE always exploiting our successes, parading our profitable ventures; why not record some of the mistakes by which we have profited, thus saving others from falling into the same errors?

Once upon a time we tried the experiment of feeding some milk to a calf and allowing it to take the rest of its ration from the cow. One trial was abundantly sufficient.

One year we secured about two thirds of a stand of corn on old ground at a suitable season, but planted it over, out of season, and got something worse than two-thirds of a crop.

One time we tried raising ducks and chickens in the same yard, but finding that a Christian spirit could not exist on the same farm, as a mixed poultry-yard, we wisely dropped it—the mixed poultry-raising, of course.

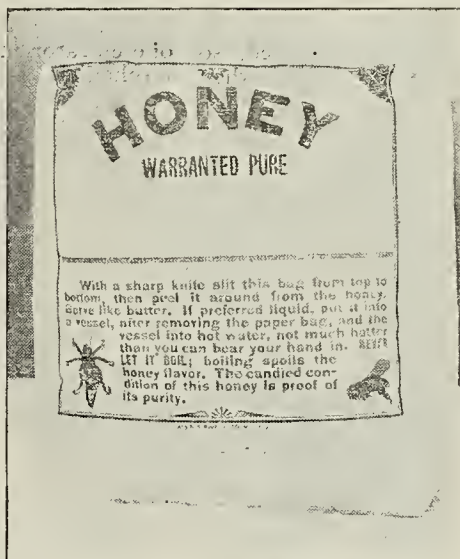
At the outset of our poultry career some "agricultural" paper told us to grease all the setting hens to destroy lice and mites before the chicks were hatched out. We thought we had heard that the opposite was the rule, but we greased the hens, and there was scarcely an egg in several settings that hatched.

We used to think that lice on the poultry had very little to do with egg-production. Many other people think that; but as for me and mine, we've changed our minds on the subject and make free use of a reliable dip or insect-powder.

Both large and small potatoes once were planted in our patch, the second season we farmed for ourselves. The crop we dug that fall persuaded us ever afterward to plant nothing but large, choice tubers from the most healthy and vigorous vines to be found.

One winter, a long time ago, we cooked a pure corn-meal mash and fed, with no other balancing ration, to a promising bunch of twenty or twenty-five shoats. We marketed no hogs that winter, and we now avoid feeding a single ration to any animal, winter or summer.

Once, and only once, we allowed our sweet-potato plants to send out long runners which took root and grew, uselessly robbing the plant of much vitality, when these runners ought to have been clipped off to a length of twelve or eighteen inches.



Honey in a Paper Bag

One time in our early farming days, we damaged a fine span of drivers when we fed too heavily on timothy-hay because of a shortage in grain. Many a deluded mortal who poses as a successful farmer and stock-raiser is to-day making this same mistake and thinking he is practising economy by it. No matter how pure and bright the hay

is, a hay ration with no grain to balance it is sure to tell on the horse's condition and working power.

The first year of our married life we put out a very promising plat of roots and vegetables, in a garden where there were several good-sized fruit-trees. Although everything had the most painstaking care, our garden was an almost total failure. In an orchard with forty feet or so between rows, it is a possible thing to raise supplementary crops; but that was the last time I have wanted to try it under heavy tree shade.

M. ALBERTUS COVERDELL.

Remember on Paper

LAST fall I noticed in FARM AND FIRESIDE an article in which the writer stated that, as he notes breakages or minor repairs needed about his farm, he jots them down in a memorandum-book and at a later and more convenient date gives them his attention. The writer did not say whether he made the carrying of a note-book a regular habit, but I judge from his statement that he does. Anyway, it is a habit the practical, up-to-date farmer ought to have.

The pocket note-book (one that can be carried every day, out in the field as well as to town, in the overalls as well as in the vest pocket) goes with modern methods of business farming as does the rule with the carpenter's kit. As a means whereby the farmer is enabled to keep tab on all the daily business

details of his farm, it stands in the front rank. Where a system of bookkeeping is run on the farm, the pocket memorandum-book is essential. When the farmer goes to the mill, he may need it. When Neighbor Jones comes across the field where he is plowing and pays him for the seed-oats he purchased some time before, he can make note of it, so that if it slips his mind he has a reference by which to check up his accounts. Notes concerning the breeding of stock, weights of farm products, amounts of this and that purchased, labor time accounts and one hundred and one other things which are continually coming up, may find temporary record in the pocket note-book.

That universal attribute of the human mind—forgetfulness—stands as the chief cause for the need of a memorandum-book, or any other record for that matter. Hence, whenever we must cope with this trait, the pocket note-book is one means of relief. When the farmer is busy, many little jobs deserve attention, but must be deferred. Jot them down and when work slackens you have a list of things to be done in the order of their importance, which, if unnoted, would be forgotten. Suppose that while the farmer is in the field working he hears the wind-pump screech and makes a note in his pocket note-book. By noon he has forgotten all about it, but after eating dinner his attention is recalled to it while looking through his book, and he sees that the thing is done.

I have long used a pocket note-book and always have one with me. At first the books became soiled by rain or by perspiration. I procured a leather case which prevented this, but which was apt to get lost. So I tied the case by a cord to a safety hook attached to my clothing. A pencil and note-book may be carried thus in a loose overall pocket on the hottest of days without loss or damage.

P. C. GROSE.

"Ground and Lofty" Cutting

LAST fall and this winter we had a splendid opportunity of observing the results of cutting corn-stalks near and far from the ground, as we had one field cut by hand and the two persons doing the work employed the opposite extremes—one cutting as near the ground as possible, and the other anywhere from six to twenty inches high. As the shock-rows were mostly cut alternately, the two methods were brought strikingly side by side.

Some persons argue that, as there are but few leaves low down on the stalk, there will not be enough extra feed obtained to compensate for the additional effort required to cut close to the ground, and that more of the stalk might just as well be left to rot down in the field as to be left on the stalk to increase the labor of feeding it and hauling the manure. This is partly true. Of course, low cutting means lugging a little heavier bundle to the shock and more bulk to be handled otherwise, but all this is repaid by it affording more material for absorbing the excrement of the farm animals to which it is fed.

As to the obtaining more feed by low cutting, there is no question. One look last fall down each of the shock-rows referred to would speedily have settled such a question; the rows cut near the ground looked clean and neat, while the others with their high, sprawly stubbles, many with leaves attached, looked like a half-way job. In walking over the field we found many more ears on the ground where the stubbles were cut high. Then, too, where the stalks are cut low, the ears and leaves in shock are not so likely to rest on the ground as when cut high.

When the ground is to be sowed to wheat after cutting, there will be much more trouble in getting the horses to walk where desired and the hoe points or disks to go right, where the stubbles are cut high. If the stubbles are low, there will not be so much need of breaking them down in the winter or spring to save the binder at harvesting-time. Also, we find that in hauling up corn or fodder for feed (we usually use a low sled for it) we pick out the low rows to drive over, as the high stubbles rake from the sled a great deal of fodder as it passes over them.


P. C. G.

Ann Arbor

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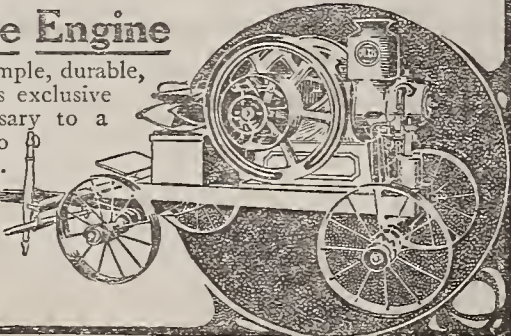
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Gardening

By T. Greiner

A Small But Dangerous Pest

A Wisconsin lady reader sends me specimens of tomato and potato leaves riddled with tiny holes and badly affected with tip-burn. She thinks some sort of blight must have struck them. "My garden," she says, "is full of little black bugs which I suppose are flea beetles. Can they be the cause of it?" Flea beetles are small and, therefore, most people pay no attention to them. But they can do a lot of damage. The perforated leaf is weakened. Its juices are sucked up not only by the beetles, but more easily by the sun, and the leaf falls an easy prey to what is called tip-burn. If there are blights about, they also can get ready entrance through the openings already made by the beetles. Gardeners generally have not fought this tiny enemy with the vigor and persistency that the case calls for. The beetles do not like Bordeaux mixture, and spraying with it may, to some extent, drive them away. The addition of arsenate of lead, however, will actually kill them. But strong doses, not less than three pounds to fifty gallons, are needed. I accomplish the same result by using the commercial lime-sulphur solution; of course, with arsenate of lead added at the rate mentioned. For this pest we must spray early. The beetles are so small they often escape our notice and they may do a lot of mischief before we even know of it.

Something for Soup and Salad

In the gardens of many German people you find, among other green stuff that is out of the ordinary, a kind of turnip-rooted celery known as celeriac or "knob celery." I usually raise some plants and have a limited call for fifty or a hundred now and then.

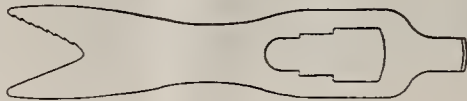
They seem to be hardier and more thrifty than ordinary celery-plants. They need no "banking" or earthing up, as they are not usually "blanched." Yet some growers do blanch them and I have eaten some in December taken fresh from the field, and my verdict was "quite delicious."

The rows can be made quite close, a foot or a little more space between them being sufficient, and six or seven inches is the right space between the plants. We gather the roots just before winter and store them in sand in the cellar. A root

or two, washed and peeled, is put in soups and broth, and gives it a nice celery flavor. Afterward the boiled root may be sliced and eaten with vinegar or oil and vinegar as a salad, often in combination with cold cabbage. It is well worth the trial.

A Pocket Wrench is Handy

It is easy to lose one of the regular wrenches that go with the wheel-hoe or garden-drill. I have mislaid dozens of them ere this. A good way to keep track of the wrench is to nail a piece of leather strap on the handle, forming a loop to hold the wrench or to attach it to the handle in some other way. Then we know where it is.



The Wrench

For some years, however, I have carried in my pocket a little "alligator" wrench such as one can find in a five-and-ten-cent store in the city or in most hardware-stores. When I wish to tighten a bolt on any small implement or on a pump or sprayer, or change the garden hoe or drill in some way, out comes the alligator wrench and it usually does the business.

More Poison Ivy Safeguards

MR. TUDOR JENKS writes from New York to the editor of FARM AND FIRESIDE as follows, referring to the articles on poison ivy in the July 10th issue: "To prevent ivy-poisoning, wash the skin with alcohol, which cuts and dilutes the oil that poisons, and then with warm water to remove the oil and alcohol."

"Here is the authority—I quote from the *Literary Digest*:

"Dr. Franz Pfaff, in a paper read before the American Physiological Society, announces that he and Mr. S. B. Orr have isolated the volatile poisonous principle of the well-known poison ivy. Such a principle has long been believed to exist, and Maisch, a German physiologist, believed that he had found it in a substance named by him toxicodendric acid. This was found by Pfaff and Orr, however, to be non-poisonous. As the real active principle (says Science, February 1, in its report of the paper), they found a non-volatile oil. This oil, when applied to the skin, causes the well-known eruption. As preventive treatment Pfaff and Orr proposed a thorough washing with water, soap and brush or, still better, a repeated thorough washing with an alcoholic solution of lead acetate. The oil being soluble in alcohol, and forming a nearly insoluble lead compound in alcohol, is thus best removed from the superficial skin."

"This treatment should be used as soon as the first irritation is felt. I have used it successfully several times. It prevents the spreading of the poison, the effect of which seems to be entirely superficial at first."

An Ohio reader gives her experience as follows:

"Bathe affected parts with sweet-oil and take a teaspoonful a day for three days. This cured me of ivy-poisoning several years ago. Now I can pull it and work around it."

Miss Esther M. Merritt, North Carolina, reports a third remedy which has proved effective in her case:

"The remedy is 'oil of goldenrod.' It not only cures with one application, but has rendered persons immune who formerly suffered with ivy-poisoning. I saw this first recommended in the Youth's Instructor, published in Washington, D. C., in the issue of November 6, 1905."

Mastering Canada Thistles

WE GOT rid of a very thickly set patch of Canada thistles in two seasons. As soon as this patch showed up in the spring the writer and one assistant spent two hours cutting off every shoot (when about four inches high). The shoots were so thick that a single stroke of a sharp hoe often cut a dozen of them. During the first season we went to the patch often and cut the thistles almost as soon as they came through the ground.

The second season we followed the same policy, except that the shoots were so few that all could be pulled up, once a week in five minutes' time. The original patch covered about fifteen square rods.

To prevent their blossoming is not sufficient; they must be cut often to prevent leaf growth—this starves the roots.

GEO. P. WILLIAMS.

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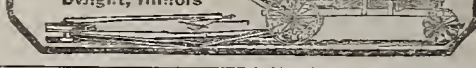


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FARM AND FIRESIDE SPRINGFIELD, OHIO

Fruit-Growing

It Pays to Attend

WHenever there is a big fruit-growers' meeting anywhere within my easy reach, say a hundred miles or so, you will find me there. I can not afford to miss the chance to get all that information that lies around loose and can be had for the picking up or, if necessary, for the asking at such meetings. A good many people go to them to ask questions on topics of vast importance to the profession, and they usually get what they are after. The information may be just what will turn almost inevitable, at least partial, failure into fair or full success.

A short time ago I was at Sodus, New York, on the occasion of the summer meeting of the State Fruit-Growers' Association. It would pay any one to go there simply to meet such men as Doctor Bailey, Professor Herrick, the new entomologist, and Professor Whetzel, the pathologist of Cornell Agricultural College, with Professor Beach formerly of the Geneva station, and many other scientists, besides hundreds of the most successful and practical orchardists of this and adjoining states. Among these latter were J. H. Hale, the peach king, and Case, the president of this most progressive society. It pays to "sit at their feet" and listen to their words of wisdom.

A visit to the Case orchards near Sodus is a revelation. There you find skillful and successful fruit-growing indeed, a combination of science and practical management. You can take the lesson home with you that it pays to be thorough. Case has nearly two hundred acres, and almost every one of them is made to produce fruit. I don't believe that he raises more than a small part of the feed that he needs for his teams. With the money for the fruit he raises on one acre he can buy more feed than he could raise on a number of acres. Of course, he sprays, and he sprays thoroughly, and with the best and most modern equipment. Cost is no object. When you see his apple-crops, and his pears and peaches, you will conclude that the fruit pays for all. I noticed a tract of lowland (probably well drained, however) in asparagus; but he was plowing the asparagus roots out. I wonder if fruit pays him even better than asparagus. If I had that asparagus-patch here near Niagara Falls, I do not think I would plow it up just yet. And fruit pays pretty well here, too.

Professor Waite, the pathologist of the Department of Agriculture, Washington, D. C., in a short address in the evening of the first day, asked: "What is the most important thing in spraying to-day?" It is the substitution of the lime-sulphur compounds for the copper compounds, he said. This is no particular news to the regular readers of FARM AND FIRESIDE, for we have predicted the passing of the Bordeaux mixture for some years. Lime-sulphur with arsenate of lead has been my favorite combination ever since the advent of the commercial concentrated lime-sulphur solutions. The use of the old Bordeaux mixture was linked with several serious troubles, especially the russetting of apples and pears, and the burning of the foliage. As Professor Waite put it, "copper poisons destroyed much of the leaf surface." On that account some good orchardists came to the conclusion that spraying with Bordeaux was liable to do more damage than did the scab or the other fungous diseases. They were on the point of abandoning or had already abandoned the practice of spraying. Lime-sulphur, in proper dilution, has proved to be entirely safe, even on the tender and sensitive peach foliage. The self-boiled lime-sulphur compound made with cold water is found to be the weakest and mildest fungicide, and particularly useful for peaches. Next in point of strength comes the self-boiled mixture made with hot water and then the commercial concentrated solution. If we want them even stronger, we may add a little common iron sulphate or perhaps copper sulphate, say two pounds to one hundred gallons. The resulting copper sulphid is a good thing for the powdery mildew of the apple, says Professor Waite.

In the Case orchards, the next day, I found the proof of the pudding. Thorough and extensive spraying experiments have here been made under the direction of Professor Whetzel and other Cornell people. Without going deeply into details, I may say that as a general observation the properly sprayed foliage was fairly or entirely free from scab, the sprayed apples clean and fairly free from worms.

The unsprayed pear-trees were badly struck with scab, so badly, indeed, that the fruit which did set afterward fell off.

The two valuable new lessons which I got here or at least had more thoroughly "rubbed in" more than paid me for all the expenses of the trip. One of them is that lime-sulphur diluted to the proportion of one to forty had just as good results in protecting apple and pear foliage from scab as the dilution of one to thirty. If that is true (and the experiments give the proof of it), we will use the weaker, safer and cheaper mixture. The other and still more important lesson is that the addition of arsenate of lead, say at the rate of two pounds per fifty gallons, doubles the fungicidal efficiency and effect of the mixture. This is a lesson I shall not soon forget, at least until we find another fungicide that is better than this combination. This lesson was well "rubbed in," as some observations of my own this season had already suggested the idea.

I have in the vineyard a vine of the vinifera type which has never failed to set a full crop and give a fair lot of a most excellent black grape, having all the purity and lusciousness of the grape as I remember having eaten it in German vineyards. But it is particularly subject to the attacks of black rot. The thin foliage of that class of grapes is also subject to the attacks of the powdery mildew and perhaps other diseases of the grape. This of all the grape-vines in the patch needs spraying, if any do. I have always sprayed it and, as I stated, always secured a crop of good fruit, sometimes entirely free from disease, sometimes with a few rot-infected berries mixed in.

This year, even before spraying, the vine appeared to make a more than usually healthy growth. When I was spraying my early potatoes, using as usual the lime-sulphur solution (commercial), at the rate of one to thirty, with arsenate of lead added at the rate of three or more pounds to fifty gallons, I thought of my fine European grape-vine and sprayed it very thoroughly with the same mixture, thinking that the arsenate of lead would not do any harm even if I had no particular insect to fight on that grape. The vine was well covered and it continued to make the healthiest growth that I ever saw on it. The effects of the spraying seemed to last until the end of July. Then signs of leaf diseases appeared and spraying became again advisable. In fact, it should have been done sooner. Undoubtedly, I would have sprayed with lime-sulphur solution pure and simple if the new lesson had not been so well rubbed in at Sodus. As it was, I used the combination, one to forty, with arsenate at the rate of two pounds to fifty gallons.

Some of our station experts and some agricultural papers of standing are still

advising the use of Bordeaux mixture, and even of Paris green, for spraying potatoes. Paris green is out of date. For spraying potatoes we may have the choice between Bordeaux and the newer lime-sulphur solutions. I have used the latter with satisfactory results and shall continue to use them. If they are preferable for tree spraying, they will be for potato spraying. I shall hereafter hold to the one-to-forty dilution.

It should not be understood that arsenate of lead alone is useful as a fungicide. It is not, in itself. It is an insecticide, simply. But in combination with lime-sulphur it forms new (perhaps not fully understood) chemical compounds which are particularly efficient as fungicides. This knowledge is worth much to me. It may be to many of our readers.

T. GR.

Nitrates No Blessing Here

A new and curious development in the irrigated belt is brought up by the following letter from a Wyoming subscriber:

"My Senator strawberries become a sickly yellow, then the leaves become brown around the edges and seem to wither away. There is some alkali in the soil and the Senator variety may not be adapted to such soil. We depend entirely on irrigation. These plants are dark inside and break easily at the ground."

Botanist B. O. Longyear of the Colorado Experiment Station kindly sends us the following information on the case:

"From the description of the conditions it appears that the trouble is not with the variety you are growing, but with the soil. Any other variety may be expected to act similarly under like conditions. In a recent bulletin from the Colorado Agricultural Experiment Station the subject of niter formation in certain soils is treated. This material is produced in excessive amounts in some soils under irrigation by the action of a nitric-acid-forming bacterium. Small amounts of nitrates in the soil are necessary for vigorous, healthy growth of plants, but when excessive amounts accumulate in the soil, the foliage of plants growing there usually show it by "burning" or turning brown around the edges and then drying up. This may also account largely for the dark color of the centers of these strawberry-plants and the ease with which they break off. A healthy strawberry-plant should not have this appearance.

"No remedy for this condition is yet known, although the matter is under active investigation here at the Colorado station with the hope of finding some means of controlling it. The growing of grass and grain crops for a time on such land has been found advisable in some cases."



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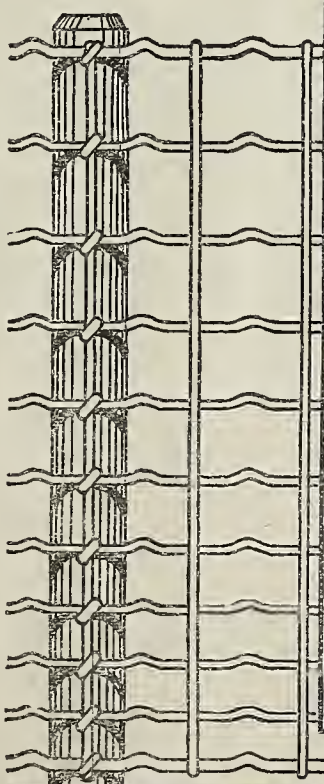
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A Slice of Real Experience

A FRIEND who lives in Indiana who has already sat at our fireside reports progress for the past year, but is not yet satisfied and wishes still further advice. That is always the way with one who gets a real passion for poultry; he always wants to do still better.

Quite full details of this man's little plant are given, from which we condense the following:

Size of house, eight by twelve by six to eaves; sun-room adjoining; floors, clay and cement, kept littered with clean wheat-straw changed twice a week, droppings taken out every morning; hens kept in during cold weather. Number of hens, fifty-four. Rations: Two quarts of cracked corn at sun-up; at nine A. M., a mash of one gallon of cut clover, three quarts of bran, two quarts of ground oats, one quart of corn-meal, three quarts of potatoes cooked, one tablespoonful of salt, one quart of cooked meat-scrap. At five P. M., three quarts of whole corn, with one teaspoonful of capsicum in the mash twice a week.

Results: A range from thirty-two and two thirds dozen eggs in January to three and two thirds in March. Difficulties: "Wife says hens have colds all the winter, running at the nose, sneezing, coughs, hoarse, little swelling of head, comb very red, ending in death of one, which on opening showed lungs color of blood and solid. Very fat. Laid the day of death. This was the story of four hens." All the hens lost feathers on lower side of body too early, bumblefoot troubled the birds last year, not this, so far. Plenty of grit and fresh water is furnished.

Query: "What can we do more in the way of care?"

This rather full report is quoted, as the case is almost a typical one on many farms. In the first place, our friend has too many hens in his house. The best authorities tell us that not less than five square feet of floor space should be allowed to each hen. Some crowd this down to four; but this friend puts fifty-four hens into a house eight by sixteen, which gives only a little more than two feet for each hen. He ought to have at least twice as much room. And then it may possibly be the ventilation is not good.

Again, the feed is too hearty. Less corn and meal should be used especially in summer, and it ought to be lessened in winter, too. In his anxiety to do well by his pets, our friend crowds them too hard. Plymouth Rocks are warm-blooded birds anyway, and they do not require as much heat-making food as lighter breeds.

All kinds of creatures are quite like men-folks. You take people and shut them up in close quarters and feed them heavy food, particularly if they are not

exercising much, and the chances are that they, too, will have colds and be sick about half the time. Every living creature must have air and food in moderate quantities. The hens that died probably had apoplexy. This disease comes from the rupture of a blood-vessel in the brain, and is caused by overfeeding, injuries or stimulating food. Sometimes the birds are found dead on the nest, there being no premonitory symptoms. Of course, no medicine can reach a case of that kind after the attack comes on.

May I not say now that I am not much in favor of capsicum as a poultry tonic? If I gave it at all, it would be in smaller doses than our friend describes, and that only in cold weather. In summer drop it altogether. And the best way to tone up a hen anyway is to give good, clean feed in liberal, but well-regulated, quantities and the best of care.

The best thing to ward off apoplexy is to regulate the diet and make the hens work hard every day. They must have plenty of exercise to feel well, just the same as men-folks. Particular attention ought to be paid to ventilation. Where there is a scratching-shed, this is much easier than by the old method. If one has no such shed, the doors should be open all day, though they may be closed at night safely if there be room enough, even if no roof ventilation be provided.

A late theory as to ventilation is to build houses with the front open to the weather, with a good overhang to keep out the storm, and wire mesh to keep the hens in. Away up in wintry Maine they use such a house as this and say they never have a sick hen. Fresh air is one of the greatest agencies for health men and animals can possibly have. Why not so for fowls?
E. L. VINCENT.

Eggs for Future Reference

MANY housewives would like to pack down eggs when they are cheap if they only knew of an easy way to do it. The following method has been successfully tried by many people in my knowledge:

Get a good tight box large enough to hold the amount you wish to put down. If it is not very tight, it should be lined with building-paper to keep out the air as much as possible. Cover the bottom of the box with two inches of perfectly dry sawdust. If there is any dampness, the eggs will mold and spoil. Some people put the sawdust in tins and dry it in the oven before using.

Take fresh eggs with good shells and set them little end down in the sawdust. Have at least a half-inch space between them. Cover them about two inches deep with sawdust, carefully pressing it down. Fill the box in this way, covering the last layer about three inches deep. Put on a tight lid and set it in a cool, dry place. I have known eggs packed in this way to keep six months and come out as good as any cold-storage eggs.
M. L. PIPER.

Why Chicks Lose Feathers

A FRIEND of FARM AND FIRESIDE out in Nebraska recently asked what she could do for her two-months-old chicks that lose their feathers. They were doing nicely until all at once their feathers disappeared, leaving only a little down. They are incubator chicks, in a new house, with no signs of lice or mites.

Very often this trouble comes from insect pests; but if the search has been thorough and none were found, we must look farther.

Skin diseases sometimes cause the feathers to drop. This is due to a growth in the little sack out of which the feathers grow; but these little fellows are so small it does not seem as if that could be the trouble here. If it is, take one part sulphur, one part kerosene and three parts lard, mix well and apply to the affected parts, only a very little at a time. Some think the lard will stop the pores and cause trouble, but that is only where a large quantity is used.

From the indications I should not be surprised if some bird of the flock, maybe more than one, is pulling the feathers of the chicks and eating them. It seems queer to us that hens should do this, but they will. They get at it in the spring of the year mostly or when they are molting and pull out their own feathers or those of other birds. The first you notice is the bareness of the body and the redness of the skin. This is carried on sometimes until the skin gets really sore. If the birds should be watched, you will see them grab one or more feathers and swallow them.

What is the cause of this? It will be noticed that the young growing feathers are most likely to be pulled. These are

filled with blood, and those who have carefully studied the matter think that the fowls which have this habit do not have just the right kind of food or else they do not get exercise enough.

Watch to see if this is really the trouble. If you are satisfied that it is, take out all birds that do the mean trick. Make them work hard for all they have to eat. A hen that is not so busy is just like a man that lies about; he gets all sorts of bad habits. And then give them a good, well-balanced ration—skim-milk, a little meat, but not much in warm weather, vegetables, green feed and a light variation of grain.

A queer device is sometimes used if some one hen is found to be addicted to feather-pulling. A fine wire is made into a bit by fastening to it a short piece of metal to go into the mouth, passing the wire up back of the comb and twisting it tight enough to hold it there, not in a way to interfere with eating, but so that it will prevent the beak closing on a feather. In a week or so the hens get so they do not care any more about pulling feathers. Modifications of these bits are handled by many poultry-supply houses.
E. L. V.

To Keep Sunflower-Seed

POULTRYMEN who have raised some sunflower-seed for chicken-feed over winter will find no difficulty in keeping it if it is dried properly. It is most convenient to keep the seed in the sunflower-heads as they are gathered. Last fall the sunflower-heads gathered at the Michigan Agricultural College were placed in gunny sacks and hung up in the feed-house so that the rats could not get at them. In about three weeks they were looked at and found to be covered with mold. It was expected that they would be all right in the gunny sacks, as there would be enough air circulating through the sack to dry them out and keep them from molding, but such was not the case. The heads were taken out of the sacks and placed on boards along the rafters of the feed-house, where they dried out in a short time and kept well through the winter.

Although I have not seen it tried, I should think that a good way to keep sunflower-heads would be to drive a number of nails in the wall of the barn, feed-house or wherever the space can be found and stick the heads on the nails as is often done with ears of seed-corn. In that way the heads will dry without molding and will not be in the way. Just one caution: The seed should be where it will not freeze before it is very dry.
EDWY B. REID.

An Accounting With the Hens

WILL chickens pay with proper care? Mr. Isaac B. Evans, postmaster of St. John, Utah, wanted a sure answer to that question. He owned thirty-eight hens. He kept an itemized account of everything bought and sold from September 22d to September 22d—one year. Here are his results.

The eggs produced sold at \$92.40, many of them being sold at fifteen cents a dozen. Besides this, one hundred and twelve chicks were raised.

The 38 hens cost, say.....\$ 20.00
Feed for year, everything included. 38.40

Total expenses.....\$ 58.40

Eggs realized.....\$ 92.40
112 chickens worth 25c. each..... 28.00
The 38 hens on hand..... 20.00

Total receipts.....\$140.40

Profit.....\$ 82.00

That I consider a good investment. I vouch for the correctness of the above.

WM. McFARLANE,
Justice of the Peace, St. John, Utah.

* * *

A hen's appetite bears directly upon her egg production. Exercise gives it zest.

Don't forget the charcoal, grit, etc. Keep plenty always in their reach.

Shift your hen-yard about every year or two. The chicks will do better and keep healthier.

Generous feeding and range produce muscle. Generous feeding and confinement, fat. Which is demanded of the fall roaster?

Turn the poultry into the garden, if possible, during the last fall days. If the ground is plowed, let them run over it before seeding. They will destroy quantities of insects.

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Live Stock and Dairy

November Lambs—Preparations Begin in March



HAVING already declared my faith in the breeding and feeding of these lambs—real lambs and not yearlings—and my reasons for that faith, I will now try to describe the methods by which success in it may best

be secured. That it is the safest and best-paying line of sheep culture a very cursory examination of the market reports of Chicago and Kansas City for the past two years will serve to show. Real lambs have, during all that period, maintained highly remunerative prices as compared with all other classes of sheep. To-day, though late in the season, they are quoted at from six dollars and twenty-five cents to seven dollars and fifty cents; yearlings, four dollars to five dollars; wethers at three dollars and seventy-five cents to four dollars and thirty-five cents.

These papers of mine, if read at all, will be read and, I hope, freely criticized by men already expert in the sheep business. I shall be glad to interest them if I can; but I am trying to induce farmers to take hold who hitherto have done little or nothing with sheep; so I will suppose that some of them will desire information as to how best to start into it.

Fifty well-bred Shropshire ewes with a good three-year-old Dorset ram should, if mated early in June, produce from sixty-five to seventy-five thrifty lambs during November. Full-mouthed ewes—namely, those of five years and upwards—are the most reliable mothers and the best milkers. As it is probable that such ewes brought to market in March have lost their lambs or proved undesirable for some reason, an inexperienced buyer runs a considerable risk of getting a sort of animated "gold brick." Still he must have ewes at once, and as he has escaped the trouble and cost of having carried them through the past winter, he can afford to pay a fair price to secure a good article, so he had better go to a well-known breeder of good reputation, tell him just what he means to do and, as he is after old ewes, he may come across a bargain. At all events he will be sure of the breeding and healthful condition of the animals, and will have a man of good repute to fall back on if "things are not what they seem." If, however, it is decided to buy in open market, the following rules for the protection of the inexperienced should be of considerable use:

The principal points to be observed in selecting ewes and rams have already been stated in FARM AND FIRESIDE of August 10th. The beginner may be a little at a loss in sizing up a bunch of sheep, but study and the observation of good flocks beforehand, and, what is very desirable, the presence of an experienced friend, will help him to a right judgment.

The age of sheep is very clearly defined by the teeth. A month or so after birth a lamb has eight small teeth in the lower jaw. At from twelve to eighteen months the two center ones have been shed and replaced, by two broad incisors, which, until fully perfected, entitle him to be called a yearling. When fully perfected he is a two-year-old. Each year after this sees a change of two baby teeth into two broad incisors, so that when he has four broad teeth he is a three-year-old; six, a four-year-old, and the complete eight a five-year, or "full-mouthed," sheep. At this age some of these teeth are pretty sure to be broken, and in the case of a favorite ewe which has been retained because of her high maternal qualities up to eight or nine years, the mouth is often found to be broken indeed, though many of these matrons manage to become even fat.

"Let the Buyer Beware"

Having found a bunch of ewes that suit as to breeding and age, the most important matter for consideration is: Are they healthy? To buy unhealthy sheep is to purchase endless trouble. Luckily, the evidences of good health are easily recognized. The principal ones are alertness

and activity of movement; bright, clear eyes; red gums, for pale gums are a sure sign of debility or disease; cool feet and sweet breath. The noses of sheep are usually moist and should be so; but any discharge from the nostrils or a dry, hacking cough should at once warn off a buyer. It is too apt to spread. Any lameness in individuals should cause a careful examination all through the bunch. The seller will probably tell you that they have been "over-driven," but ask your boy fresh from college what "*caveat emptor*" means and make a note of it.

Look at their Feet

Of the afflictions of sheep, it is, in this case, foot or hoof rot you have to fear. Want of space forbids me to go into this matter here, but I hope at some future time to direct you to the best authorities to consult. A few words should suffice here to put the buyer "next" to it, as far as is practically necessary. If, then, there is any noticeable lameness, catch two or three of the affected ones and examine the fore feet. If any undue heat is found in the hoof and around the coronet; any signs of inflammation; any thin, prurient discharge, or, most certain sign of all, a most peculiar and unpleasant odor; do not hesitate a moment, but drop all further consideration of that bunch of ewes and seek elsewhere, the further from them, the better. It may not be foot rot, but you can't afford to take any chances. Stock-yard authorities are pretty good at quarantining contagious diseases, and I know that foot rot is surely of that class, but a few such sheep may slip by. Scab, the other most common trouble, is more to be feared when buying of irresponsible parties outside. There are some minor diseases which may catch you unawares, but if the signs of general good health are present, you may feel safe to buy, if the terms suit.

Ewes when presented to the ram must be neither fat nor poor. Either of these



The Noon Hour on Rape Pasture

conditions threaten sterility. They should be in good firm flesh and full of life, vigor and activity, and much care will be required to have them in that condition by June. They will be kept yarded till the pastures are ready for them. I have already described a sheep-yard of simple and cheap construction which was found sufficient in my time in England and is still commonly used there; but, of course, where a yard with good shelter-sheds is already in existence it will be used; but I do not like inclosed stables for breeding sheep (for feeders heat is less dangerous) unless they are unusually well ventilated and partitioned off to prevent crowding. Sheep are, of all domestic animals, most fitted by nature to bear rough weather. Heavy rains, very cold winds or damp and muddy lair must be guarded against; but a pretty severe amount of frost and snow suits them far better than close confinement with the danger of overheating. Sheds open to the warmer aspect, with plenty of good litter, is all I have found necessary.

Tried and Approved Rations

Considerable care must be given to their feed, and I want to say here, once for all, that I have never found any real advantage in steaming or cooking their food in any way. It is, I think, an exploded fad. Innumerable experiments have been made in mixing the various grains for rations, and much light has been thrown on the subject. I hope to refer to this in detail on some future occasion. Here I will simply say that, by the general consensus of expert opinion and of practical experience, there is no better ration for

breeding ewes than a mixture of two thirds oats with one third bran or linseed meal or cake. If no oats have been grown, wheat is the next best grain and then barley. Corn is too fattening and, I am convinced, should not be given to breeding ewes or their lambs. Half a pound a day of this ration given in two meals is sufficient to commence with. It should be fed in clean troughs in the yard. There, also, their daily allowance of succulents should be given. Of roots, sliced Swede turnips, which have been carefully stored and are perfectly sound and free from frost, are far better than beets or mangels. In the absence of these, red clover or corn-stalk ensilage will be best; or alfalfa in great moderation may be tried; but its effect must be carefully watched, being too fattening. From two and one half to three and one half pounds per day generally suffices to keep the ewes moving forward. A little dry food, red-clover hay or timothy, may be given in the yard to occupy their minds between meals.

Exercise the Best Tonic

Of almost, if not quite, equal importance with their food is plenty of exercise. This should be enforced on them for two hours, morning and afternoon in all but very wet and stormy weather. To make them eager for this the main supply of their dry food—meadow, red clover or timothy hay and good clean oat or pea straw—should be given them in the pasture-field into which the yard gates open. This may be scattered about at a distance from the yard, but it is far more economical to provide movable racks for this purpose, the locations of which should be frequently changed. If their times of feeding and of exercise are punctually observed, an immense amount of trouble will be saved the shepherd, for the ewes will soon begin to look forward to them like a bevy of school girls to eleven o'clock recess and they will need no bell; all left-over food must be carefully cleaned up, and if too much of any sort is found, the amount fed must be lessened. Do not forget the salt once a week, though I prefer lumps of rock-salt in various places under cover where they can help themselves. With plenty of roots and succulents they will use but little water; still, it should always be accessible, and always clean and sweet.

This period of yarding will probably not exceed a month if they have been bought in March, for as soon as spring has fairly set in and the pastures offer a fair bite of grass, the ewes should be turned out, though at first it will be safest to yard them at night. It is now that a careful examination of their condition must be made. If signs of putting on fat are apparent, their daily allowance of grain must be lessened, but never altogether withdrawn. If too low in flesh, it may be increased to a pound, given in three feeds; beyond that it is not advisable to go. If much difference is observable in their condition, it is probable that the more masterful have been robbing the weaker ones and it will be well to separate them into two lots, so that the above change in their grain ration can be carried out, for it is important that, in order to confine the period over which the lambing will be spread to as short a time as possible, the ewes should be as nearly even in condition as their various natures will permit when the ram is introduced. Frequent change of pasture, with a run of an hour or two on a piece of early rape or rye, if there is any, or a change from bruised oats to wheat or from bran to oil-meal is desirable, if any signs of scouring are apparent on the young grass. But as June approaches, beware of too much fat. For fear of bloating, an hour or two is as long as the ewes should at first be left on rape. They should then be returned to their pasture.

I hope to conclude these details of the Easter lamb business in my next paper.

JNO. PICKERING ROSS.

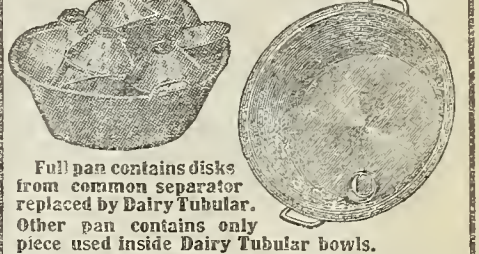
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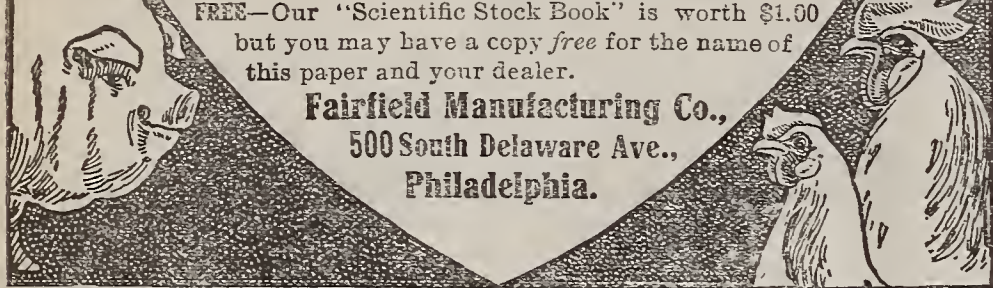
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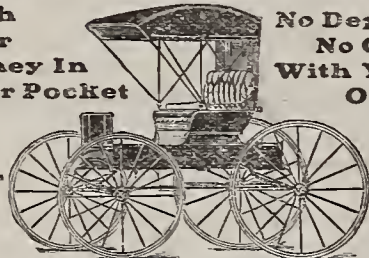
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Advice in Southern Dairying

THE fundamentals of dairy feeding hold equally good everywhere, but in the South, particularly, where the available feed-stuffs are so different from those the Northerner has on hand, the details of practice have to be varied considerably to fit conditions. A letter of inquiry from a Florida subscriber brings up that very point. The general problems of feeding dairy cows before and after freshening time have been taken up in two previous FARM AND FIRESIDE articles, in issues of April 25th and June 25th. Our Southern readers may, however, need to make some variations from the feeding recommendations given in those articles, at least as relates to kinds of feed.

Follow the general rule of feeding the cows well while they are dry. A good mixture is corn-meal, oil-meal, cotton-seed meal, bran and ground oats if you can get them in your vicinity—otherwise rice-bran. Give good rations of this feed daily in order that the animals may be in a good condition when they freshen. At the time of freshening take away the solid grain ration and give bran-mash. This is made up by using two parts bran, one part ground oats and one part oil-meal with a handful of salt mixed up in warm water.

The effect of this ration is to keep the cow in a good, laxative condition and supply her with sufficient feed for her nourishment. If she is in a constipated condition, it is wise to give her a dose of salts, preferably a pound divided up in small quantities so she will eat it when mixed with her feed.

After the cow has freshened there is no better milk-producing feed for cows than cut alfalfa, which our correspondent mentioned. Of course, a varied ration, consisting partly of concentrates, is desirable.

Undoubtedly, in the South, it is possible to obtain wheat-bran, rice-bran, cotton-seed meal and corn-meal, and thus provide a feed for the cow which is just as cheap or even cheaper than are shorts or other higher-priced mill-feeds commonly purchased by Southern dairymen. In our correspondent's case I suggested feeding a mixture of one part shorts, one part wheat-bran, one part rice-bran, one part corn-meal and one part cotton-seed meal mixed together with the cut alfalfa and cotton-seed hulls, which were mentioned as being available.

As for the amount of such feed to give, it is impossible for any one to advise. The best manner to determine how a cow should be fed is to study the cow herself. When she is fresh, start her on a grain ration of four pounds of the above mixture daily and then increase the ration one half pound every other day, weighing the milk to determine whether or not the cow is responding to the increase in feed. If she is not, then further increase will be wasted and worse than wasted because it taxes the digestive apparatus without any given results.

On the other hand, if the cow responds and increases in her milk-flow sufficiently to pay a profit on the feed, then it is well to continue increasing the ration. Experience has led me to believe that with a well-bred dairy cow, placed in good flesh and a strong condition prior to freshening, the ration can be profitably increased in this gradual manner until the cow is eating as much as twelve to seventeen pounds of the grain ration daily, and by this method she will be induced to give the greatest amount and the richest milk she is capable of.

Of course, when a cow is taking a heavy ration she must be watched closely, her digestive apparatus kept laxative, and if at any time she begins leaving even the smallest portion of her feed, then it is advisable to begin diminishing at once the ration, else she is liable to get off feed and sicken.

I would not allow the calf to nurse for any great length of time. Our correspondent asks whether it would be advisable to allow the calf one teat or to let him take the first milk from all four. The first milk is not as rich as the stripplings, so that if the calf nurses at all, it would be advisable to compel him to nurse an equal amount from each teat, thus preventing scours and sickness in the calf and also leaving the rich milk for the owner. Again, if the calf nurses one teat, it will be found invariably that this quarter will dry up more quickly than the other three and thus leave the udder out of proportion.

In any case it is best to take the calf from its mother about the second or third day of its life and teach it to drink milk. For the first two or three weeks it should have fresh, warm milk immediately after it has been taken from the cow. Ten pounds a day fed in two or, better, three feeds is a sufficient amount during this time. After this time skim-milk can gradually be substituted.

Never feed a young calf cotton-seed meal, as this deranges the digestive apparatus and many calves die from the effect.

HUGH G. VAN PELT.



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Springfield - - - Ohio

LACK OF MONEY Was a Godsend in This Case

It is not always that a lack of money is a benefit.

A lady, of Green Forest, Ark., owes her health to the fact that she could not pay in advance the fee demanded by a specialist to treat her for stomach trouble. In telling of her case she says:

"I had been treated by four different physicians during 10 years of stomach trouble. Lately I called on another who told me he could not cure me; that I had neuralgia of the stomach. Then I went to a specialist who told me I had catarrh of the stomach and said he could cure me in four months but would have to have his money down. I could not raise the necessary sum and in my extremity I was led to quit coffee and try Postum.

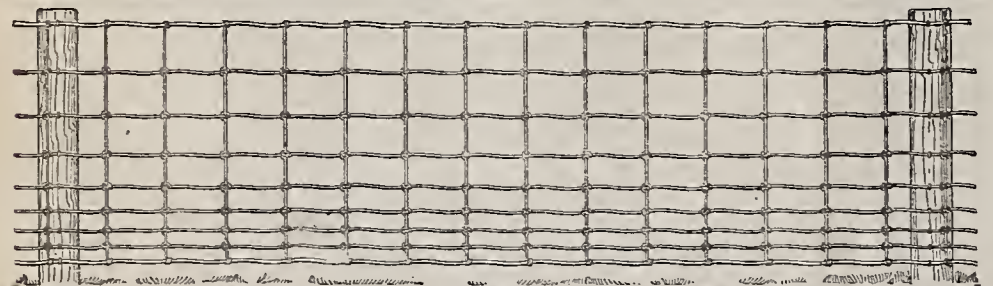
"So I stopped coffee and gave Postum a thorough trial and the results have been magical. I now sleep well at night, something I had not done for a long time; the pain in my stomach is gone and I am a different woman.

"I dreaded to quit coffee because every time I had tried to stop it I suffered from severe headaches, so I continued to drink it although I had reason to believe it was injurious to me, and was the cause of my stomach trouble and extreme nervousness. But when I had Postum to shift to it was different.

"To my surprise I did not miss coffee when I began to drink Postum.

"Coffee had been steadily and surely killing me and I didn't fully realize what was doing it until I quit and changed to Postum."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



Wire Fencing Prices Reduced

Write today for a Free Copy of our New Fencing Catalogue

We have reduced our prices this year on our high grade woven wire fencing owing to a new factory connection, and the lowest prices quoted by anyone on high grade fencing is the result. We use hard, tough steel wire instead of the soft wire commonly used and there is quality in every rod of it. We also sell poultry netting, ornamental wire fencing, fine wrought steel fencing and all other fencing material and our prices will certainly interest you if you contemplate building a fence of any kind this fall. We have a special fencing catalogue which we will be glad to send you free if you will simply write a letter or a postal card and ask for it. Write us at the house nearest you, 19th and Campbell Streets, Kansas City, or Chicago Avenue Bridge, Chicago.

Montgomery Ward & Co., CHICAGO and KANSAS CITY

Live Stock and Dairy

Why Milk in Summer?

IN DAIRYING and butter-making, one of the most important essentials is the control of temperature. It is very difficult and almost impossible to produce the best grades of butter without having the control of temperature. This is only one of the reasons for regarding winter as the most favorable season for dairying.

During the winter months it is a simple matter to regulate the temperature, both in the ripening and the churning of the cream. Milk can be kept sweet and butter held in good condition for longer periods. There is less bacterial contamination with which to contend. It is easier in the winter to supply the necessary warmth than it is in the summer to furnish the necessary cold.

While at first thought it may not seem true, winter is also the most favorable time from the standpoint of the milking qualities of the cows and the raising of the stock. If the cows freshen in the fall during September, October and November, it brings the dry season at a desirable time in the summer, during July and August when the flies are the most troublesome. They pester the cows so that, in order to avoid the flies, they will not eat normal amounts of pasture, but confine themselves to covered places in bushes, the barn or wherever they can get. It is not only the lack of food that causes the fall of the milk-flow during fly-time, but the worry and annoyance caused by the flies. When winter dairying is practised, the cows are not milking in fly-time.

Winter dairying also prolongs the lactation or milk-yielding period and helps to keep up a large flow of milk throughout the season. Cows which freshen in the fall are fed dry feed and grain during the first few months of the lactation period, and then when spring comes and they are turned out to pasture on good, succulent grass, they get a fresh start, which keeps up the milk-flow. It is more desirable to change a cow well advanced in her lactation period from dry feed to green feed than it is to make the change from green feed to dry winter feeding and short pasture. The latter change tends to decrease the milk-flow, while the former keeps it up.

Better calves can be raised when they are dropped in the fall and they can be raised cheaper. When fed during the winter on skim-milk and what hay or grain they will eat, they are in good condition to turn out on pasture in the spring and mature better than when raised on skim-milk in spring and summer and then wintered on dry feed. One always has more or less trouble in raising calves during hot weather. It is harder to keep the pails sweet and the quarters free from odors. By raising the calves on the skim-milk in the winter they will not require it in the spring and summer, and most of it can go to the hogs, summer being the most favorable time for raising hogs.

Winter dairying provides work for the winter and also an income. There is more time for studying feeding and dairy management, which one does not have time to look after properly in the rush season. The effects of different feeds can be studied from an economical and productive point of view. Most farms do not provide enough labor for the winter months, and there is too much dependence upon the results from the summer's work. If the city laborer worked as little in the winter as the average farmer, he would fall far short of even making a living. Of course, in the nature of farm work, most of it must be done in certain limited seasons, but part of it can be planned so as to come in the winter. If the heaviest part of the dairying comes then, there will not be so much to look after in the spring and summer, and one can accomplish much more as a result.

Dairy products, furthermore, command a higher price in the winter than at any other season and, while the cost of production is slightly greater, the higher prices make the net profit in favor of winter dairying. The stock must be fed and watered, the stables cleaned and bedded, whether the cows are producing milk or not. By a little extra labor and the growing or purchase of a little extra grain to supplement the hay or corn-fodder, the expense is turned to profit. The expense for purchased feeds is reduced to a small item when the manurial value is considered. From one half to two thirds of the actual cost of cotton-seed meal, oil-meal, bran, etc., is paid back to the farm in the form of manure and would be worth this if purchased in the form of commercial fertilizers. By winter dairy feeding and saving the manure, the following year's fertilizer

account may be reduced nearly to the extent of the cost of the feed.

Here in Pennsylvania winter dairying is being practised more extensively every year, and the same is, I believe, true for the country in general. Better barn construction is doing away with a good many of the old-time hardships connected with winter dairying, and the silo has opened up new possibilities in the way of feeding to keep cows at top production. The faster the appreciation of the possibilities of this business spreads among American dairymen, the better it will be for them.

LYNFORD J. HAYNES.

Analyze Your Feed Problem

TO MAKE the dairy profitable with feed-stuffs at present prices, the herd has to be one in which every animal shows a good milk test and responds automatically, so to speak, to good feeding. The farmer can determine their qualifications as milk-producers by use of the scales and Babcock test.

When it comes to feed he should do some careful figuring on what to feed and how much. Nature has provided that the cow supply herself first and the milk-bucket second. True, some high-bred dairy animals will keep up their milk-flow for a time by depleting their own bodies—but that means serious injury to them. Experiments show that normally about sixty per cent. of the food which a cow can eat goes for the maintenance of the body. The other forty per cent. finds its way into the milk-pail. The cow is, therefore, entitled to all she can eat and digest properly.

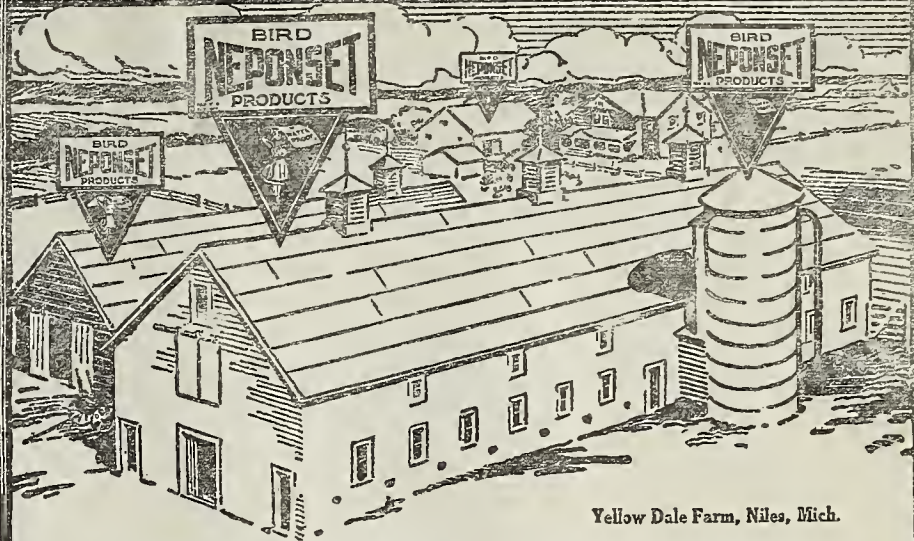
To feed her economically, no dairyman can say feed each cow so many pounds of grain and so many pounds of roughage. The amount of each feed depends largely upon the flow of milk. A cow giving a large flow of milk requires more feed than one giving less. Here is where good judgment is above par. Often the cow-owner has more grain than roughage or he may be short on grain and long on roughage. He will need to make a close study of the balanced ration to put profit in the pail.

Sometimes we get the idea that the more a cow eats, the more milk she will give. If she assimilates all she eats, that is a fact, but there is such a thing as overdoing the matter, so that the excess of feed will be an actual hindrance to the production of milk. What we want to do is to feed the cow all she will turn to advantage—and no more. Clean managers will tell the story as a rule. Anything left over is a pretty good sign that we are feeding too much of some things.

SYLVANUS VAN AKEN.

If you can't figure out your balanced ration, tell us about what you have in bin, stack, mow and silo, and FARM AND FIRE-SIDE will figure it out for you. EDITOR.

Are You Going to Build?



Buy Your Roofing on Proof—Not Claim

The one and only basis on which you can afford to choose your roofing is that of proof—proof of what it has done, not claims of what it may do.

Do not be deceived by extravagant claims and high-sounding guarantees. They are merely made for lack of proofs of what a roofing has done. Insist upon seeing roofs that have given satisfaction for years.

We can point out roofs of proof, right near you, where Neponset PAROID Roofing has lasted as long as the highest-grade shingles. It has been on Government buildings, dairy barns, stables, poultry buildings and railroad and industrial buildings everywhere for over a decade. We have been in one line of business for over a century and the experience gained in all that time is back of

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NEPONSET PAROID Roofing for barns and general farm buildings. Slate in color. Does not taint rain water. Resists fire.

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Consult Our Building Counsel Department—tell us the nature of the buildings you propose to erect or repair, and we'll send you the Bird NEPONSET Book which treats your special case. There are dealers in Bird NEPONSET Products everywhere. If you do not know the one in your locality, write us and we'll tell you.

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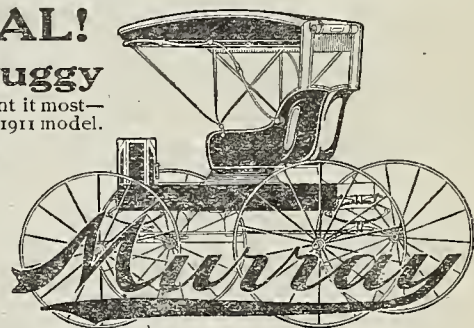
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This preparation is not a ration, but, when added to the ration given, acts as a tonic to aid and strengthen the digestive apparatus. This is "the Dr. Hess Idea" of feeding which teaches that "a poor ration, well digested, is better than the best ration, poorly digested." In actual practice, Dr. Hess Stock Food shortens the time necessary to fatten a hog, steer or sheep and saves many times its cost in decreased food-loss. It increases milk flow for the dairyman; cuts 3 or 4 weeks off the fattening period for a steer; keeps horses in prime condition; makes sheep husbandry pay and relieves minor stock ailments. Sold on a written guarantee.

100 lbs. \$5.00.
25 lb. pail \$1.50.

Except in Canada and extreme West and South. Smaller quantities at a slight advance.

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Ashland, Ohio

Also manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer. Free from the 1st to the 10th of each month—Dr. Hess (M.D., D.V.S.) will prescribe for your ailing animals. 96-page Veterinary Book free for the asking. Mention this paper and inclose 2c. stamp.

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has put poultry keeping on the plane of a paying business. Fed in small portions once a day in soft feed it increases egg production as no other known preparation will. It is a tonic, and is as beneficial to growing chicks as to laying hens. It helps through the moulting period and fatts old fowls in a short time. It cures Gapes, Cholera, Koup, etc. A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

1½ lbs. 25c, mail or express 40c; 5 lbs. 60c; 12 lbs. \$1.25; 25 lb. pail \$2.50.

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Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/4 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Square Deal in Lykens Valley

WE REFER to Lykens Valley, Pennsylvania. It lies at right-angles to the Susquehanna and is only two or three valleys up that stream from Harrisburg. It advertises the fact that it has awakened and thus admits that it has been asleep. Its slumbers have been unbroken because it has had no railway—a valley forty-four miles long shut out from the railway world until 1910!

Sweet are the uses of adversity—if prosperous stupor may be called such. Lykens Valley has now started up broad awake and proposes to do things. It has organized a board of trade—not for any one town or village, but for Lykens Valley—the whole forty-four miles. This is in itself unique. Most of our American towns seek to become cities by fighting their neighbors. The Lykens Valley Board of Trade represents, not one municipality, but ten—count 'em, ten—Killinger, Berrysburg, Gratz, Springville, Sacramento, Valley View, Hegins, Weishample, Mabel and Gordon. Here is a lesson for other groups of towns. It reminds one of such organizations as the Tyne Ports in England, where towns with common interests have got together to do things—like the building of wharves and docks.

Lykens Valley has committees on General Development; Miscellaneous Manufactures; Dairy, Butter and Cheese Industries; Fruit and Vegetable Industries; Cereal and Milling Industries; Lumber Industry; Coal Industry; New Buildings; Amusements and Recreations; Banking; Transportation, and Legislation. The proper committees propose to study soils and locations for dairying and cheese-making as well as such specialties as fruit-growing and gardening. Looking at the prospectus only, one would say that this awakening has a chance to make Lykens Valley an ideal place.

No doubt, as a portion of their progress, the matter of coöperative marketing is being considered. Few farmers are noticed on the roll of officers, but the farmers should get into this new awakening game, and get in strong. They should organize to a man. They should see to it that Lykens Valley becomes the paradise of the producer rather than of the middleman, and if the Lykens Valley merchants do not want the farmers' trade to go to the mail-order houses, they should organize so as to compete with the mail-order houses—there seems to be enough of them to do it. The motto of that board of trade is "Progress and a Square Deal." It pledges itself to "use its influence for developing among manufacturers, merchants, builders, contractors, farmers and bankers a staunch spirit of absolute square dealing, mutual helpfulness, strict integrity, universal thrift and continuous progressiveness." If it carries out these admirable principles, it will see that its banks are moderate in interest charges, that its new railway—so far as the valley can affect the matter—charges only such rates as will pay fair returns on capital actually invested, that agriculture is taught in the rural schools and manual training in the town schools, that its public officers deal honestly with their offices and that the largest possible proportion of the ultimate consumer's dollar goes to the farmer.

And this will be good for Lykens Valley.

Or any other valley—for all places are basically alike.

Hence this editorial. It is addressed to progressive, square-deal people everywhere.

* * *

It is not always generosity that prompts the desire to give your neighbor a piece of your mind.

Now is the time to begin preparations for the ice-harvest by constructing a substantial ice-house and a small dam or reservoir to be filled by the fall rains.

While it may come natural to want to place the big apples on top of the barrel, no farmer is anxious that the best-bearing tree should be nearest to the public highway.

A Simpson County, Kentucky, farmer is trying to be specially good to hunters, for he has posted this sign: "Hunt as much as you please, boys, and when you hear the horn blow, come to dinner."

A working woman and a shirking man make a bad team.

It is hard for an empty bag or a full man to stand upright.

There is no better place on earth to begin life, spend a life and end life than on the farm.

Practical tests in various Missouri orchards last season proved that the wet spray is altogether more satisfactory than the dust spray.

The Lady and the Tiger

SOMETIME in the year 1909—or even before that—a group of English and Canadian capitalists made up their minds that they could do what George J. Gould and E. H. Harriman both failed in attempting—unite the ownership of enough railways in the United States to make up a singly-owned, singly-operated line from the Atlantic to the Pacific.

This shows that English and Canadian capitalists have nerve, for they threw themselves into a conflict with our American railway kings. The battle ended about the last of July. The lady returned from the ride inside the tiger. The Pearson British-Canadian syndicate lost a good part—no one knows how much—of the forty or fifty millions they had invested in Lehigh Valley, Wabash, Denver and Rio Grande, Western Pacific and other securities which they had bought, and the banking firm of Kuhn, Loeb & Co., of New York—the bankers of Harriman—kindly took the properties off their hands.

Like a trapped mink, the foreign syndicate got away by gnawing off its own foot. All of which is instructive.

While this deal was being fought out, stocks went down, down, down. They went down until they got low enough so that the Pearson people had to sell. They were in a position like that of a farmer who has bought cattle for feeding purposes and given a mortgage on the cattle and his corn for a good part of the price. We all know what happens when cattle fall in price under such circumstances. The farmer, as soon as the price goes down so that the cattle and corn are worth only a little more than the debt, is called upon to put up more money. If he fails to do this, the bank sells the stock and corn. Exactly this happened to the "stock" of the Pearson syndicate, and the prices are supposed to have been hammered down by the American capitalists so as to bring about exactly what happened.

To most of us the mere episode is of slight interest. But while prices were sagging and slumping word was sent out to the effect that it was Taft's "attack" on the advance in freight rates that caused it.

It will be well to remember this when next some governmental action is condemned because prices go down—or up. When prices, which are the playthings of the stock exchanges and chambers of commerce, fluctuate mysteriously, it is fair to assume that it is because they are played with, rather than to charge their fluctuations to any one outside the playrooms.

* * *

It annoys the gossip only to hear whispers, the meaning of which he can not gather.

Friendly criticism may be a good thing, but most people seem to be so constituted mentally that they can not conceive of any criticism as friendly.

The farmer who toted flowers to his sweetheart in the courting days should not object to helping his wife weed the flower-bed once in a while.

If the set of grass in the new meadow is somewhat thin, be sure to pasture it just enough to have it cropped off by the stock, to encourage stooling, which will mean a ranker and more vigorous growth next spring.

A young farmer near Dover, Tennessee, has devised a unique device for catching hawks. He has erected a pole about thirty-five feet high and set a steel trap on top. This being a new perch, the hawks invariably fly to it. He has caught over twenty this season.

The Big Rural School

ALL our readers must have been interested in the articles we have presented dealing with the work of Miss Field in the rural schools of Page County, Iowa. A very striking feature of this has been Miss Field's making use of the materials at hand—the one-room school-house and the ungraded school. The people of Page County have not had to wait for improvements until they could afford to build new and big buildings. But, after all, the consolidated schools are better than the one-room schools.

Are they not? And if not, why not? Many of our readers must have had experience in changing from the old way to the new, from the little school to the big, from the many small weak schools to the few big strong ones, from the ungraded country school to the graded ones.

From such as have opinions based on knowledge, we should be glad to have letters. The rural schools are in process of change. They have waited long for their turn, and greater changes will take place in them in the next decade than they have seen in the past half-century, or we are greatly mistaken. And they will be in the future, as they have been in the past, what the farmers make them. Let's have the experiences of farmers, and farmers' wives and rural teachers as to the benefits and defects of the consolidated rural school.

* * *

It is very hard to get money out of a hole after you have once dropped it in.

All the youngsters from five to ninety years old enjoy the circus in the good old summer-time.

Take particular notice of the quantity and quality of all the crops grown on your several fields. It will be a more dependable method of ascertaining where fertility is needed than any chemical soil test.

Wanted—Good Commission Merchants!

FARM AND FIRESIDE believes in coöperative marketing.

It believes that farmers should unite in associations which would be strong enough to look after all shipments from the time they leave the farm until they are sold. This would put the commission business on an entirely new basis.

But, so long as this is not done, we may help each other by recommending honest and competent commission merchants. Please help your fellow-producers by writing to FARM AND FIRESIDE giving the names of any tried and true commission merchants in any city, anywhere, to whom you have shipped. Tell us what you have consigned to them, how long you have been acquainted with them, and what sort of service they have given. This information will be used by us in helping to advise subscribers about their shipments. In giving it, you help the honest merchant and the inquiring farmer. Everybody who knows a good commission firm, please write us.

* * *

Horse sense doesn't seem to be much account when the barn is afire.

Two kinds of chickens will do to kill—those that haven't begun to lay and those that have quit.

The soil for the apple-orchard must be thoroughly drained. It will not do to let the water stand about the roots of the trees.

Why are we on the farm? Is it just because we must have a place to live, and perhaps we can do that as cheaply and with as little effort in the country as anywhere? That is a pretty low ideal of farming. What we need is the fire in the heart that leads us to work, and work hard, for the very best there is on the farm. Not simply a few more cattle, a little more land, a thousand dollars more. That is not the highest type of farming; but the longing to make the home we live in a little beauty-spot in the community; the desire to do something which shall bring the community up a step or two higher than it used to be; the purpose of filling our place so that when the sun goes down men may say, "He made the world better. We miss him so!"—that is farming that is worth while.



FOR that we are in the midst of what everybody now recognizes as a peculiarly significant political campaign, I have felt moved to indite some observations apropos thereof. Perhaps they will not seem so very apropos, but one gets so impregnated with politics in these piping times that an occasional indulgence ought to be pardoned, even if its relevance to anything in particular may not be quite obvious.

You will have been told, so many times that it is no longer capable of making an impression, that we are conducting a new governmental experiment in this country. True enough, even if the idea is no longer capable of inducing a thrill. But I am going to ruminate briefly about another experiment, and a much more recent; an experiment with the substance, not the form, of republican government; an attempt to develop representative government into really popular government. We are trying to superimpose the fact of government by the people, upon a system whose structure was reared with only the thought of administration by the representatives of the people. And whether it is our destiny to fail or to succeed in this departure, I conceive will find index in the results of the polling that will take place on November 8th.

Politicians Count on Country Conservatism

It is, I think, "up to" the farmers. Historically, traditionally, the rural masses have been disposed too much to accept that government which was imposed upon them by the people of the cities. Ancient Greece was, institutionally, more Athens than Greece. Old Italy was more Rome than Italy. Pre-revolutionary France was mostly Paris; Paris led, France followed. When Pitt went in for a strong protection program in England, shutting out the manufactures of Parisian factories, Paris was plunged into hard times, and the French Revolution started, not with the long-suffering rural peasantry of the provinces, but with the unemployed and hungry artisans and shophands of the capital. When wars were to be borne and when the devastation of internal disorder must be sustained, then the farming community came in for its participation. It was permitted to contribute its crops, its taxes, its flesh and blood; but the big towns managed the big game of affairs, and the countryman was rather a silent partner.

It has been much the same down to our own times. How many times have I sat, on election night, in the office of a county central committee and, when the city wards sent in returns of revolutionary cast, heard the seasoned politicians speak up with reassuring tone:

"Oh, don't worry; wait till the country townships get in; they'll stick and it'll come out all right."

Which was very apt to prove true. The country is, and always has been, the headquarters of conservatism.

But the country is breaking away from its old moorings. It is getting prosperous, self-confident and reliant. It reads "better stuff," and reads it more carefully; it studies and thinks more. Why, you can't get anybody in the big cities, nowadays, to read much farther than the base-ball scores and the racing "dope." The city folks want sensations, not ideas. It is the countryman who is doing the real cerebral work of this country, and right now he has the opportunity to make the whole nation sit up and take notice of the fact that he is going henceforward to demand consideration.

Don't set all this down as guff and buncombe. You know mighty well that it is neither, when you stop and think how the farmer is entrenched economically. He has the world by the tail, with a down-hill pull, and the world knows it. It didn't know it until recent times. The farmer always had the power, but he didn't appreciate it and neither did the man in town.

Farm-Land Gives the Firmest Foothold

It is easy enough to explain. You can build more railroads, more shoe factories, more sugar refineries, more sky-scrapers, more cities and towns, indefinitely; but you can't build any more acres of land. There isn't any more of it now than there was ten years or ten thousand years ago. That is why the farmer has everybody at his feet; why the cost of living goes up; why farm labor, which isn't protected, has had its wages advanced faster than other labor; why prices of farm products, the world over, go up faster than prices of city products. The world's capacity, for population, for comfort, for culture, for refinement, for intelligence, depends on the land's capacity. The

By Judson C. Welliver

world just naturally must have what the farmer produces for it, and must take it on the terms the farmer dictates.

And that brings us to the question of what terms the farmer will make and how he will formulate them. He gets just one chance a year; sometimes only one in two years, and that is on election-day. He is coming down to an election, only two months ahead, in which he will have an unprecedented opportunity to make his expressions heard and felt.

The question is, what is he going to do about it? For that matter, the same question applies to everybody else. What are we all going to do about it? It is perfectly apparent to the most casual observer that no political party as now organized and managed is satisfying the country. On the face of all the returns of recent years the Republican party embraces a goodly majority of the people. But you can travel around these United States and talk to the people as I have been doing for the last few months and not realize that a mighty large proportion of the people who consider themselves Republicans are thoroughly disaffected with the Republican party, and likewise that a vast share of those who classify themselves as Democrats are quite as disaffected with their party. All of which seems to justify the conclusion that as no party seems able to deliver what the country wants, the country ought to decide to depend less on parties, to be less devoted to party names and slogans, and to do its voting with reference to getting representatives elected to office who will represent public opinion, rather than party management.

The country has come to understand pretty well that it can not place its reliance entirely in any one political party. Ever since Roosevelt became president, the big constructive pieces of legislation have been accomplished by the united efforts of part of the Republicans and part of the Democrats. Every time this combination of progressive Republicans and progressive Democrats has "pulled off something" the country has applauded.

Show Congress

We can't expect Congress to be any more non-partizan or bi-partizan or unpartizan than the country is. Much as we growl about it, the fact is that Congress rather likes to please the country, if it can only find out what the country wants. There are exceptions, of course; there are many who frankly don't care a continental what the country wants. But these men are decidedly a minority; albeit they certainly exercise an influence entirely disproportionate to their numbers.

Well, I am convinced, and I think you will agree with me, that what the country wants more than anything else right now is less partizanship in Congress. Very well; let the country set an example to Congress, by forgetting partizanship when it goes to the polls in November. Let it vote for men rather than for a party name. If this country is "regular," if it is for the kind of government that men like Aldrich and Cannon and Hale and Bailey and Fitzgerald want to give it, then it ought emphatically to reelect these men and the others who have been keeping step with them. If, on the other hand, the country is insurgent or progressive or whatever you choose to call it, if it is in sympathy with men like Bristow and Clapp and Beveridge and Murdock and Norris and Cummins and LaFollette, then it ought to reelect, with emphatic majority, these men and all others whom it is sure it can trust to go along with them. No matter whether they are Democratic or Republican, the men whose votes in the past have been satisfactory to you ought to get your vote this year. If you believe that the Payne-Aldrich tariff is the best customs law ever framed and if you lived in a district represented by a Republican who voted against that law; then, if my philosophy about this situation is correct, you ought to vote against that Republican, even if it is the first time since 1856 that you have failed to vote a straight Republican ticket.

And, on the other hand, if you are a Democrat and believe that the insurgent Republicans have the right idea on the tariff question, if you believe that they have made a courageous and an intelligent fight for better conditions in legislation, then I believe you ought to forget all about Thomas Jefferson and Andrew

Jackson and vote to indorse what insurgency has been doing.

I am perfectly familiar with the old-fashioned partizan argument, but I don't think it is good this year. The next House of Representatives is going to be Democratic anyhow, if there is any accuracy at all in political signs of the times. The question which you must decide, when you do your voting, is "how can I best indicate to the leadership of the next House, to President Taft and his advisers, to the Senate, to the state legislature and administration, what I want done?" It seems perfectly plain to me that you can best do this by voting for the man who best represents your idea of what you want done, utterly without reference to the political label he wears.

For Instance

Let me make an illustration. Representative Norris of Nebraska organized, led and won the fight to put petroleum and its products on the free list. Speaker Cannon led, managed and lost the fight to keep a duty on these articles. Suppose Mr. Cannon is reelected and Mr. Norris is defeated. Will not the conclusion be more or less warranted, and will it not certainly be drawn by the people who can serve their interests in that way, that Cannon has been indorsed and Norris has been repudiated? It will not do to reply that in defeating Norris you have elected a Democrat who stands for free petroleum and petroleum products. The fact is that the next Congress will make up its mind whether the country is insurgent or not, according as the country indorses or repudiates the individual insurgents in Congress who have made the big fight of the last two years.

Take the case of Senator Beveridge of Indiana. He is a candidate for reelection. His state is very close. If he is returned, it will be a "straight tip" to every congressman from Indiana—and that, whether the individual congressman be an insurgent or a regular, a Republican or a Democrat—that Indiana stands for the thing that insurgency stands for, and wants Congress to perform accordingly. If, on the other hand, Mr. Beveridge is defeated, the fact will be pointed out, inevitably, that Indiana has refused to indorse the things that are insurgent. And that argument will be advanced even though the Democrat elected to succeed Beveridge may believe in every item of the insurgent program.

The best thing that could happen, for the whole country, in the election this year, would be to have a lot of Democratic districts down South go Republican and a lot of Republican districts up North go Democratic. There are too many "interest" Democrats in Congress, just as there are too many "interest" Republicans. Congress ought to be rid of all of them.

As 1910 Goes, So Goes 1912

There is a big fight going on within the Republican party for control of that party. There is another big fight going on within the Democratic party for control of that party. In both parties it is the contest of the progressives against the conservatives; and in both parties these contests have immediate bearing upon the question of which faction shall control the next national convention of both parties. If the Republican party this fall suffers the defeat of most of its insurgents, you may as well understand that the Aldrich-Cannon-Dalzell element of Republicans will control the national Republican convention of 1912. Likewise, if the country repudiates insurgency this fall, that fact will similarly strengthen the hand of the old line, conservative element which is right now fighting for control of the Democratic party.

If the country goes progressive this fall, both parties will nominate progressive candidates for president two years from now. If the country repudiates the progressives this fall, very likely an inter-party will nominate a progressive president in 1912. In that case, I should say, the temper of the country is such that a third party movement of serious purpose and proportion would be altogether likely to result.

The farmer vote will very largely decide it. The farmer is so situated, socially and economically, that he can be thoroughly independent about his vote, more easily than any other man can, and there has not been a time within the last fifty years when the public interest more earnestly demanded absolute independence in the voting-booth than right now.

Margaret Ann's Mother

By L. M. Montgomery

Illustrated by Robert A. Graef



MADGE HAMLIN and Howard Sherman came down the long, elm-shaded street together. It was a holiday and they had been celebrating it by a stroll in the park and a look at the bicycle races. Miss Hamlin was sub-editor of the *Ladies' Banner* and was as clever and charming as she was handsome. Howard Sherman was clever, too, if he was not exactly handsome. He was the junior member of a law firm and was known to be well on the way to fame and fortune; consequently, he was much sought after by mamas with eligible daughters. At present he and Miss Hamlin were excellent friends; their fellow-boarders at Mrs. DeHaven's would have unanimously declared that they would soon be something more.

The other boarders were loitering about the porch of Hillside Hall as Miss Hamlin and her escort turned in at the gate. There were Ned Mitchell, the government clerk whom everybody liked, and Fred Owen, whom nobody liked. Then there was Mrs. Austin, the pretty plaintive widow, who had thorns beneath her roses and who didn't like Miss Hamlin, and, lastly, there was foolish, frivolous Nellie Stirling, who was not too foolish to be spiteful nor too frivolous to be malicious and who cordially envied Miss Hamlin.

Miss Hamlin paused on the porch. The group had been laughing, and Ned Mitchell was looking roguish, which was circumstantial evidence that he had been mimicking somebody.

"Oh, Miss Hamlin," said Nellie Stirling, "there's the funniest old body up in the parlor. You should see her. I'm certain her bonnet came out of the ark, and she has a huge carpet-bag beside her. Ned struck up a conversation with her, and he says it was very amusing."

"She isn't a bad old soul, you know," put in Mitchell. "Good and motherly and all that. But her grammar—and her accent! She is shrewd, though—wouldn't give away her name or business. But I fancy the maid made a mistake in showing her into the parlor. Probably she came to call on the cook."

Miss Hamlin had listened indifferently.

"Possibly some country relation of Mrs. DeHaven's," she suggested.

"If so, I should say the poor old soul didn't get a very gushing reception. She has been sitting there for two hours and looks tired to death."

Miss Hamlin passed on into the library. Mrs. DeHaven met her, looking rather flurried.

"Miss Hamlin," she said, "your mother is here. She came after you went out and said she would wait. She is up in my parlor—I asked her to take off her things, but she said she would rather not until you came."

Miss Hamlin had turned crimson and then pale, but she only said, "Thank you, Mrs. DeHaven," and went swiftly upstairs. But not to the parlor. Instead, she fled up a second flight to her own room, shut the door and sat down on her bed. In the mirror before her she saw herself reflected—handsome, graceful, well gowned. And she saw plainly enough, also, the figure in the parlor below—short and dumpy and bent, in the old scant, ill-fitting alpaca dress, the faded shawl and ancient bonnet—with bony hands and wrinkled face—her mother.

How Mrs. Austin and Miss Stirling would sneer! How Fred Owen would stare with unconcealed and supercilious disgust! And Howard Sherman, the fastidious and critical, what would he think of her mother? Well, he would not forget that he was a gentleman, he would not act as the others would. But he would quietly cease his attentions to her and look elsewhere for a mother-in-law.

Suddenly she got up with a determined face. "I won't do it," she said aloud. "It would spoil everything. I'll go down and put the whole case frankly before mother. She'll see how things are and she'll be quite willing to go quietly away to some nice boarding-house for the night."

She took a step toward the door and then paused. What was it she was going to do? Was she actually ashamed of the dear old mother to whom she owed so much?

She turned again and went over to the window. Pushing aside the lace draperies, she looked out on the maple boughs and over them down the vista of misty blue streets. She had not always been Miss Hamlin, B. A., sub-editor of the *Ladies' Banner*. It was not so very long, as years go, since she had been a little girl in print dresses and sunbonnets, living with her widowed mother out among the country hills, in the little brown house hidden by apple-trees. They had been poor, and life was a hard struggle for her mother, who managed the little farm and strove to shield her daughter from the hardships she herself had known. But they had been very happy there. Then, when she had grown into a big girl, clever and ambitious, she had gone away to school and after that to college. The little mother had worked and pinched and planned at home,

denying herself all luxuries and even comforts for the sake of her daughter.

Madge Hamlin had not been ungrateful, nor was she idle. In vacation she taught school, and at college earned some money by her pen, in addition to the scholarships she had taken.

When Miss Hamlin got her position on the staff of the *Banner* she did not forget her mother. She wanted her to come and live with her in town. But Mrs. Hamlin said she would not be contented there and preferred to keep to her farm. So every summer Madge went home to spend her vacation in the old village among the friends of her girlhood.

"If mother had spent on herself all that she spent on me," said the girl, "she would not be so queer and old looking now—and I wouldn't be where I am. I ought to be proud of her—and I am proud of her. She is the best and dearest mother ever a girl had. I wonder if those people down there would do one tenth as much for me as my mother has done."

She went down to the parlor contritely. At the door she paused unseen, looking at the shabby, dusty little woman, sitting forlornly at the further end, and so oddly out of place in the fashionable apartment. She ran forward. "Mother dear," she cried.

"Oh, Marg'ret Ann!" The old woman rose eagerly. Her face brightened at the girl's warm greeting. "So you're glad to see me, Marg'ret Ann?"

"Oh, yes, mother. I am so sorry I was out. Why didn't you let me know you were coming?"

"I didn't know myself till this morning. I'd been kinder hankering to see you for ever so long. I hain't been awful well lately and I missed you awful. I just felt as if I must come up and see you."

"That was right. How tired you look—and dusty. Why didn't you ask Mrs. DeHaven to take you right

much like that little old one of yours out home, 'way up under the eaves, is it?"

"No, mother. And yet, do you know, I love that little old room out home far better than this one. And sometimes—very often—I just long to fly back there and be your own little girl again, to have you sing me to sleep and hear the poplar-leaves rustling outside."

Mrs. Hamlin patted the hand lying on her shoulder.

"It's just the same as when you left it, Marg'ret Ann. I'd never have a thing changed. All your little pictures and traps are there, and your old chair. When I get lonesome, I go and sit there and fancy I kin see you a-setting there, reading or writing as you used to do."

"Come, mother, it's dinner-time—you know dinner at night is the custom here."

All feeling save love and tenderness had vanished from the girl's heart. She drew the bony, knotted hand through her arm and led Mrs. Hamlin down to the drawing-room. There was a decided glitter in her eyes and an unmistakable ring in her voice as she said, "Mrs. DeHaven, this is my mother."

Mrs. DeHaven rose to the situation like the true lady she was. Mrs. Austin smiled and said sweetly, "So glad to meet our dear Miss Hamlin's mother." Nellie Stirling giggled audibly and Fred Owen stared superciliously. Ned Mitchell shook hands with boyish heartiness, and Mr. Sherman, in the background, bowed in grave silence. Miss Hamlin felt relieved when dinner was announced.

Mrs. Hamlin was at first too overcome by the splendor of the table appointments and the variety of the courses to talk, but this soon wore off. She had a good deal of the assertiveness that belonged in a refined way to her daughter, and possessed the same faculty of making herself at home in all circumstances.

She talked wholly to her daughter about the folks at home and the various interests of her farm and dairy.

Mrs. Austin listened with a covert smile and occasionally shrugged her shoulders at Ned Mitchell. But Howard Sherman maintained an unbroken silence. When dinner was finally over, she took her mother to her room again.

"Now, mother dear," she said, slipping down on a cushion at her mother's feet, "let me lay my head in your lap and play I'm your little girl again."

The older woman passed her toil-worn hand caressingly up and down the bright waves of auburn hair. "I'm so sorry, mother," said Miss Hamlin after a while, "but I'll have to leave you alone for an hour or so. I must go up to the office. The issue goes to press to-morrow. You won't mind, will you?"

"Bless you, dearie, of course I won't mind. I wouldn't want you to neglect anything. I'll go down to the parlor and chat with some of the folks. That yellow-haired young chap seemed real nice and sociable to-day."

Silence fell between them for a few minutes. A sense of rest and tender protection filled Madge Hamlin's heart as she sat with her head in her mother's lap. There was nothing so dear as a mother. She reached up and pulled the hard hands down to her lips.

"There's nothing so good and true as your love, after all, mother. I wish I could see you oftener. I'm afraid I'm growing hard and selfish."

It was nine o'clock when Miss Hamlin came down from the *Banner* office. She had been detained longer than she had expected. A fine mist was falling; the streets were wet and slippery. It was not often she had to stay late, and when it was necessary, Howard Sherman was always on hand to see her home. He was not there to-night.

"If he is so easily frightened away as that, perhaps it is just as well he should be," she said to herself.

Miss Hamlin paused in the hall to remove her rubbers. Out through the door floated Nellie Stirling's voice.

"Did you ever in your lives see anything so funny as old Mother Bunch?"

"I fancy our beloved Marg'ret Ann won't hold her head quite so high after this," laughed Mrs. Austin. "Yet she actually seemed proud of the old lady."

Miss Hamlin fled to the library.

She pushed open the door and there

sat her mother and Mr. Sherman. The latter rose.

"I was sorry I could not bring you home this evening," he said, "but I have been trying to entertain your mother. She was rather lonely in your absence."

"That's a real nice young man, Marg'ret Ann," said Mrs. Hamlin confidentially when they got upstairs. "I like him real well. Is he your beau, Marg'ret Ann?"

"Dear me, no, mother—at least—I don't know—"

"Mebbe you don't, but I have my guesses, child."

Mrs. Hamlin decided to go home next morning on the early train. Mr. Sherman and Madge went to the train to see her off. When it had rumbled out, they walked down the cool street and out under the elms, where Mr. Sherman asked his companion a certain question. But it was not until long afterward that he told her how he came to.

"Do you remember the day your mother came to Hillside Hall? I heard what the others said. I wanted to see what you would do. When you brought her down so proudly, I knew then that you were loyal and true."

"And what if I had failed you?" asked his wife.

"Then—then—I am afraid I should never have asked that question under the elms."



"She ran forward. 'Mother dear,' she cried"

to my room? You could have had a bath and a nap."

The old woman hesitated. "Well, Marg'ret Ann—I didn't know—somehow—I kinder felt lost here. I didn't expect such a stylish place. The folks all seemed so tony—and everything so dreadful high class—it just come over me that you mightn't want a queer, awkward old body like me coming in among your fine friends. So I thought I'd just wait here and see what you said, and if you thought I'd better go somewhere else and not disgrace you."

"Oh, mother," said the daughter with a pang of self-reproach, "no, indeed, I am not ashamed of you. Don't I owe everything to you?"

"I didn't think you'd be. But I didn't want to do anything that'd injure you, Marg'ret Ann."

"You must come to my room now, mother," she said gently. "You'll have time to bathe your face before dinner and I'll brush your hair. You must be very tired."

With a sigh of relief, Mrs. Hamlin sank into a rocker in her daughter's room and looked about her with a keen, appreciative eye.

"This is an elegant room of yours, Marg'ret Ann—not

SUNDAY READING

Our Common Burdens

By Rev. Chas. F. Weedon

WE ARE race-bound. No one can shut himself away from the world and say that he has no part in it. The fellowship of men is largely one of sorrow and suffering. Canon Westcott says: "I can not sin alone; I can not, let me thank God, strive alone. Each sacrifice is the sign of an inspiration which is for me, also. It is my own cause which is at stake there in the homes of thoughtless luxury; my own cause which is at stake there in the haunts of squalid misery."

Neglect of humanity is neglect of oneself: If your neighbor has small-pox, it is for your protection to see that he gets rid of it. If you spray your trees against the "brown-tail," it is only fair that your neighbor should spray his, also. The prosperity of men is a matter of personal responsibility, for we are members of a body—an organism. One sure plan of lightening the common burden, and so our own, is the endeavor to lift the weight from another. One way in which we can bear another's burden is

By Bearing Our Own

It should be done in silence. It is a source of comfort to tell friends of our trouble and that privilege should not be resisted in the seeking of sympathy or denied in the giving of it. Yet there is much that should be borne by our own strength. The distribution of burdens seems uneven. We do not know. Be considerate, for every one is hiding some heart-sorrow. All that we know is what is assigned to us. It must be carried manfully for others' sake. To endure without complaint is a sign of power. "If thou canst be silent and suffer without doubt, thou shalt see that the Lord will help thee." Continually telling our woes is like the spreading of weeds, there follows a multiplication of trouble. Some one tells of a little girl failing to do what was asked of her, who said: "I'm afraid, mama, I put it in my forgettery." It is commendable not to rehearse the annoyances of life indiscriminately, but to put them in our "forgettery." Bearing our own burdens unselfishly is the part of a strong character. Yet there comes a time when we ought to speak to save ourselves or another from greater misfortune. Many an aching heart has found a pillow of rest in the bosom of a friend. But, above all, if the fault is our own, we should not make an ado which will add to another's trial. One of the sad conditions of life is that we can not transfer our experience. Few will learn from the sufferings of another. One must suffer for himself, each must bear his own burden.

We may bear each other's burdens by

A Cheerful and Hopeful Spirit

The world needs a deal of sunshine. Organize a sunshine club in your neighborhood. The enjoyment of the present is often discounted by gloomy forebodings. "Yes, to-day it is a pleasant day, but to-morrow we shall catch it!" Then some people are never satisfied. "How is your wife, John?" "Well, I don't know, when the sun don't shine, she's miserable, and when it does, she says it fades the carpet." Sunshine is good medicine. "For ten thousand of the aches and pains and irritations of men and women we recommend sunshine. It is a wonderful balm for neuralgia, rheumatism and the 'blues.' It soothes better than morphine. It is the best plaster for a wound. Take it out into the alleys by all the sick-beds. Not a phialful, not a cupful, but a soulful." Make the hours shine and do not wait for the shining hours. Be hopeful, there are bright days ahead, bright even in tempest and cloud if so be your soul but reflects a Greater Light. The best is yet to come. Trust the better instincts of humanity. If your wish is not gratified, it will be far better to whistle than to talk. The world is not to be a failure even if our plans do not succeed. Keep on the sunny side of the street and it is more than likely that you will be on the successful side. It is not probable that we can always carry music in our hearts and a song upon our lips. Not always. Shut melancholy up, not by confining yourself, but by taking joy to some one else. Brooding over misfortune is unhealthy. Out with that grouchy feeling. A man in New Jersey kept his bed for thirty years and wouldn't speak to any

one. He would browse around at night, eat a trifle and take to bed again. Poor fellow. He shut the door to human kindness and died a grouch. Your life is not a failure if you have kept your integrity. It is a mistake to think that happy people have no trouble. A cheerful spirit is one that has learned the lesson of hope even in sadness; one that will often appear glad for others' sake when it holds within its shrine a bitter woe. There are those who minister in cheerfulness and yet are in greater distress than those who are ministered unto. Cultivate a happy disposition. We can bear another's burden by

A Wholesome Interest in Others

"What part do you perform in the great drama of life?" asked a wit of a farmer. "I mind my own business," was the quiet reply. True interest is not of the prying sort, that ferrets all petty ins and outs or hankers to know things of a private nature. Curiosity is not the motive that is back of a wholesome interest. Said Sidney Smith, "When you rise in the morning, form a resolution to make the day a happy one to a fellow-creature." But it will cost you something. "Yes, you may find people ready enough to do the Samaritan without the oil and the twopenny." We can give no hearty lift to another's burden without self-sacrifice. Yet this is the truest way of doing ourselves good. "He who wishes to secure the food of others has already secured his own." Helping humanity is helping ourselves. Selfishness is slow suicide. It is a law of the physical world that action and reaction are always equal and in opposite directions; it is law, also, of the moral world. Deceive and you deceive yourself. Deal unjustly and you paralyze your own sense of justice. Every blow at your fellow-men is aimed at yourself. Starve our fellow-men, deprive them of the good that we can do them and we invite famine into our own souls.

The price at which we estimate humanity is the value we put upon our own life. Take up the cause of the world then as a common burden. There is a strong temptation to retaliate and avenge abroad. Here's a fine chance for your "forgettery." It is Tillotson who said, "A more glorious victory can not be gained over another man than this, that when injury begins on his part, the kindness should begin on ours." To bear injustice without resentment is putting a powerful lever under the weary burden that weighs so heavily upon our race.

A last and most important expedient for bearing one another's burden is by the

Comfort Which is in Jesus Christ

Human resources are limited. We look with hopeless suspense upon the suffering of humanity. We can not escape our problems. Great and wise men have no solution for them. But nineteen hundred years ago a Life came into the world which is an earnest harbinger of solution. Jesus Christ is the burden-bearer of the world.

He has taken upon Himself the load of sin that has bound mankind in grief. Men are the slaves of evil. That is their burden. Lift the soul to its throne and the burden falls away. This is the spirit and power of Christ. The Christian catching this new life and giving it to others bears a yoke that is easy and a burden that is light.

Be Strong

Maltbie Davenport Babcock

Be strong!

We are not here to play, to dream, to drift.
We have hard work to do and loads to lift.
Shun not the struggle; face it. 'Tis God's gift.

Be strong!

Say not the days are evil. Who's to blame?
And fold the hands and acquiesce. Oh, shame!
Stand up, speak out, and bravely, in God's name.

Be strong!

It matters not how deep intrenched the wrong,
How hard the battle goes, the day, how long,
Faint not, fight on! To-morrow comes the song.

The Benefits of Encouragement

By Orin Edson Crooker

BENJAMIN WEST, the veteran artist, whose pictures have been hung in royal academies and other celebrated galleries all over the world, once said, "A kiss from my mother made me a painter." When he brought her his first boyish sketch, she praised its good qualities, said nothing of its defects and rewarded his efforts with a kiss.

A word of encouragement is the best possible tonic for old or young, man or beast. "How does your employer like your work?" a young man was once asked. "I'm sure I don't know," he replied. "He has neither praised me nor found fault with me all the time I have been with him." The truth of the matter was that the young man was giving entire satisfaction, but it wasn't his employer's habit to praise.

We Need Encouragement

There never was a man yet who wouldn't work better for a few words of praise. We all like to know that our work is appreciated. It adds brightness to the sunshiny day and helps dispel the gloom of a day of clouds and storm to know that the services we are rendering meet with the approval of the one we serve.

Not only this, but encouragement always lightens the load. Life is a constant, up-hill struggle. Every one, toils along the pathway of life bearing some burden that is peculiarly his own. No one else can bear our particular burden, for it belongs to us individually. But almost any one can help to lighten the weight as it presses down upon our shoulders, by speaking a word of encouragement.

It doesn't cost anything but a little thoughtfulness to give expression to the word that means so much to others. No investment, however, brings larger dividends in happiness and increased joy of living both to giver and receiver. Try it and be convinced!

Thoughts That Will Help You

Life? What is it? Mere existence—the ability to move and see and hear? A strange strength-giving force that somehow keeps us plugging and jostling along in the crowd? The power to think and plan a little way ahead? The faculty of accumulating a bit and then of spending it?

What it amounts to depends upon WHAT WE MEASURE IT BY.

How do you measure your life? By the weight of your purse? By the extent of your popularity? By athletic prowess?

This world of ours is peopled in an odd manner—something like the intersecting of threads in a piece of lace. Each thread helps to hold in place other threads, an unusually strong one often lends strength to a great many. And the moment any thread loosens, those touching it slip. Each life affects, on an average, three others—some of us can do more. We influence three whether we wish it or not—it's something we can not avoid. What kind of a power do you exert?

Selfishness, suffering, sorrow, thrive here. Why? Because we have forgotten why we are in the world. We are blind to the image in our hearts. We misuse the divine gift of individual will; disregard the great command to love and to uplift. We measure by false standards.

LIFE IS OPPORTUNITY. Whether for good or evil is for you and me to determine. Boundless chances for both surround us. We must not take a narrow view. And, wherever we are, let us not let the thread slip, but, with all the strength and will and love we possess, let us stand **FOURSQUARE**.

We are human, of course, and we live with human folks, but in each of us God has placed a faint image of Himself. Into every one of us He has implanted a will to do and to be. Unto each of us He has given a great commission—**TO LOVE AND TO LIFT.**

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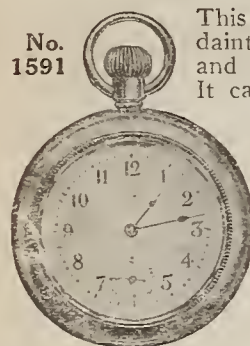
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The Housewife's Club

EDITOR'S NOTE—Most every woman has originated some sort of a device or convenience to make part of her housework easier and less burdensome, and to all who have, we would ask that you write and tell us about it. Aside from making a little pin-money for yourself, you will be helping others, and this is what "The Housewife's Club" is for. We will give \$2.00 for the best description and rough sketch of an original home-made household convenience or labor-saving device, and \$1.00 for the next best, or any that can be used. We will also give 25 cents each for good kitchen hints and suggestions, also good tested recipes that can be used. All copy must be in by the tenth of October. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contribution will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

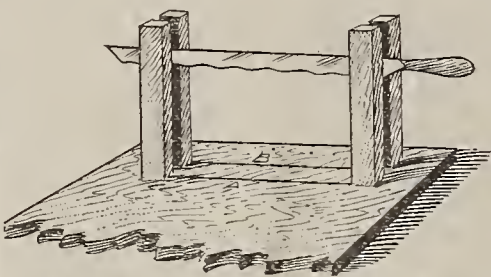
The Children's Garters

MY CHILDREN'S garters kept coming off their stockings so often that I began to investigate. I found that the nickel post was so smooth that there was nothing to keep the stockings from slipping, so I cut a small piece of tape and covered the post and then bound it tight with heavy cotton. They have given me no more trouble.

MRS. L. M. W., New York.

Bread and Cake Cutter

IT is often quite hard to cut cake or bread in even slices, so I made the cutter shown in the illustration, which works very satisfactorily. To make the cutter, take a board for the base and bore three-quarter-inch holes far enough apart so that a loaf of bread can be slipped between the two sticks, which should be fitted into these holes. The sticks should be sawed off even on the under side, and on the upper they should be slit down the



Ingenious device for cutting bread evenly

center, so that the blade of a long bread-knife will work up and down as shown in the illustration. Draw a line (B) on the base board. When cutting the bread, put the end of the loaf at this line. Then draw another line (A) as far from (B) as you want the thickness of your slices of bread. The knife then works up and down in the slits in the two end sticks and cuts the bread evenly when the end of the loaf is put at the (B) line.

MRS. W. D. B., Indiana.

How to Paint Canvas

TAKE two bars of naphtha soap and add three quarts of water and let boil. Take one quart of paint any color desired and put it in a larger vessel. Beat the boiling soap until it produces a good lather and add the lather to only one quart of paint until the paint increases to three quarts. Stir thoroughly and add one tablespoonful of turpentine. Have the canvas or muslin stretched tight and with an ordinary paint-brush apply the mixture while hot. Put the canvas in a clean place to dry. Be very careful to see that only the lather is used, as the water will spoil the paint. These directions will prove satisfactory if correctly followed, and the paint will not blister nor crack.

H. J. F. P., Ohio.

Good Cucumber Pickles

SINCE the first time that I tasted them I have averred that no one could excel my husband's mother in the making of cucumber pickles and I had not been married long before I asked her just how she made them. They were so freshly green and so crisp as to almost make one suspicious that alum or some other questionable ingredient might have been used in their preparation; but there was nothing unwholesome in the recipe and the method was not difficult.

Make a brine just strong enough to float an egg. Into this put the washed, freshly gathered cucumbers and cover with a clean cloth tucked down around the edges. Whenever more cucumbers are to be added, lift the cloth carefully so as to be sure to get any scum that has collected on it. Rinse off well in cool water and tuck down over the freshly added cucumbers.

The action of the salt will turn the pickles a sickly yellow-green, but when they are "soaked out," they will return to their original rich green color.

Take from the brine what cucumbers you want, rinse off, put in iron dinner-kettle, cover with cold water and slowly heat well up to the scalding-point. No harm will be done if the water even touches the boiling-point if it is poured off quickly and cold water added immediately. This alternate heat and cold seems to make the pickles firm and the warm water freshens them quickly, only a few changes of water being necessary.

When ready, cover with vinegar that is not too sour. (half cider vinegar and half water is best), adding from one to two cupfuls of sugar—to suit individual taste—and a few pieces of stick cinnamon or your favorite ground spices in sacks. Heat, turn into jar and in a few hours they will be ready for use.

MRS. F. N., Iowa.

Little Helps

To clean wicker furniture, apply gasoline with a stiff brush. It will make the wicker look like new.

J. F. R., Iowa.

A teaspoonful of vinegar put into the fat when frying doughnuts saves considerable of the fat, as the dough does not absorb as readily as otherwise.

To prevent cream curdling when mixing it with vinegar, put sugar in the cream, stir well, then add the vinegar, a little at a time.

MRS. G. H. B., Nebraska.

A secret I have lately discovered and which I regret not knowing sooner is the adding of a few drops of lemon-juice to eggs while scrambling. It imparts the most delicious flavor imaginable to the egg.

M. B. G., Wisconsin.

When cooking eggs, drop the shells on the front of the stove for a few minutes and let them get brittle. Then crush them with your hands or a rolling-pin until very fine, and throw them to the chickens. It is splendid for them.

MRS. J. D., Texas.

Churning Made Easy

MY CHURN is the up-and-down kind, but I do not mind churning with it at all since I hit upon this idea of putting a spring in the handle. I bought a few cents' worth of coil wire spring, about two inches in diameter and one foot or

twenty inches

in length.

I fastened a piece

of wire in one

end of the

spring and tied

it to a staple in

the ceiling,

while I fastened

the lower end of

the spring to the

churn-dash

handle.

With the

spring thus ad-

justed, you will

find that you

will have to put

only a little of

your weight to

the dash—for

the spring coil

will bring it up

again. In this

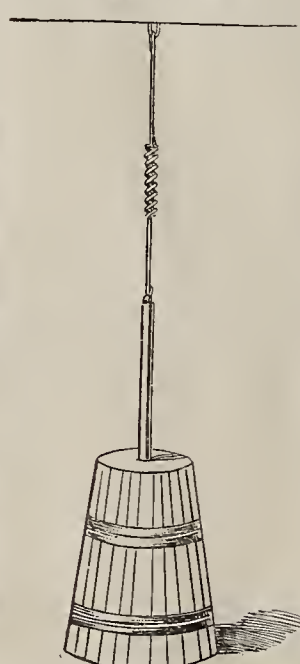
way you can do

your churning

with a great

deal less work.

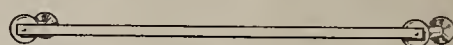
MRS. C. W. F., Ohio.



The spring attachment makes the work lighter for the woman who churns

Handy Dish-Towel Rack

DISH-TOWEL racks are very necessary articles to have in one's kitchen. But it is not always easy to buy them, so I invented one like the illustration on this page. It is not only very convenient, but very inexpensive. To make the rack, take two large spools and slip each one



Towel-rack made of two spools and a stick of wood

over a three-inch long nail. Drive the nails in the wall above your kitchen table and then fasten a nice, smooth, narrow slat of wood between the spools, tacking it securely at both ends. Do not varnish or stain the rack, as it looks neat without and is much easier to keep clean.

MRS. F. S., New York.

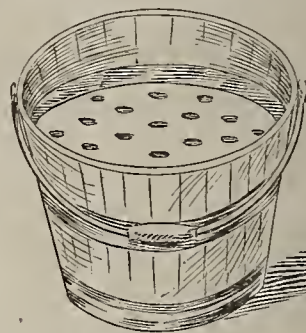
Good Biscuits

I EXPERIMENTED for years with biscuit recipes and finally originated one which I find entirely satisfactory. Here it is: Five cupfuls of flour, sifted twice, three teaspoonfuls of baking-powder and one teaspoonful of salt. Sift all together, then rub in three heaping tablespoonfuls of lard and with a spoon stir in milk until it is just the proper consistency to toss on a floured board. Roll, cut out and bake.

MRS. H. B. M., Connecticut.

Drinking-Vessel for Chicks

IT is generally very hard to keep enough water in small pans for the little chicks to drink. If a large pan is used, they are apt to fall in and drown. So I have invented this drinking-vessel, which I find most useful. Take milk-crocks, rather shallow wooden buckets or anything that is smaller toward the bottom than at the top. Then make a lid or "float" of pine board that will go down about half-way in the vessel when empty. Bore the lid full of holes, and by its floating



Drinking-pail for young chicks

on the top the chicks can hop onto it and drink. As the water is consumed, the "float" settles deeper in the vessel, and if enough chicks should get on it and sink it any, the lid wouldn't go down deep enough to drown any of them.

MRS. J. M. G., Kansas.

Filling for Cracks in Floors

PUT enough torn newspaper in a quart of hot water to absorb it and let it stand until pulpy. Mix together one third of a pound of flour and one third of a pound of pulverized alum; add this to the pulp and stir thoroughly. Cook until the mixture is about like putty and press into the cracks while warm.

MRS. J. O. W., New York.

Something Worth Knowing

EVERY little while we read in the papers of some one who has stuck a rusty nail in his foot or knee or hand, or has been injured by fire, and that the lockjaw resulted therefrom, of which the patient died. After years of experience I have found that such wounds can be healed without the fatal consequences which often follow them. The remedy is simple, always on hand and can be applied by any one, and what is better, it is infallible. It is simply to smoke the wound, or any bruise or wound that is inflamed, with burning wool or woolen cloth. Twenty minutes in the smoke of wool will take the pain out of the worst wound. Repeated two or three times it will allay the worst cases of inflammation arising from a wound. A young man whom I knew was affected with lockjaw. The doctors had given him up to die. At my suggestion he was treated by smoking the injured part with wool and he fully recovered. The remedy has often been used in my own family with good results always.

MRS. L. C. S., Kansas.



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"Greater Love Hath No Man"

By Bolton Hall

Illustrated by Fred E. Lewis

ON A bitter cold night early in this year of grace 1910 an elderly man trod the streets of New York alone. None asked him whither he went or why he was abroad so cold a night at so late an hour. But his condition was not hopeless for he still had a keen interest in others. He noted the unsteady step, the drooping head, the scanty clothing of a young man who walked some distance ahead of him, and speculated upon the risk he ran of freezing to death



"... he bent over the prostrate form"

if he should be too drunk to reach a place of shelter. Soon he saw the young man sway and fall, and he quickened his own flagging steps that he might render assistance.

As he bent over the prostrate form he saw that the young man was not drunk. By degrees he got from him the story of exhaustion from cold and hunger; the despair that had made him yield to weakness and fall, hoping that the biting cold might soon put an end to life. By dint of encouraging words, promises of food and the exertion of his own meager strength the old man got the younger one upon his shaky feet and, linking arms with him, steadied his wavering steps as they made their slow way along.

The streets were deserted, save for a shadow here and there skulking along in the lee of buildings seeking all possible shelter, not only from the cold stinging wind, but from the colder watch of the uniformed "protector of the city," as he walked to and fro on his beat. The two men, wending their way by devious paths, did likewise. When one is abroad at such



"They stooped to raise him—he was dead"

an hour on such a night, the protection of the "blue-coated gentry of the night-stick" is not willingly sought.

Churches pointed their dark towers heavenward, their cold, forbidding doors giving the lie circumstantial to the warmth of the loving gospel they professed to typify. Storehouses, full to bursting of all the products of field and garden, iron bound and shuttered, gloomed down upon the two wretched men. Hall lights burned dimly in great apartment-houses, but none were listening for the uneven footfall of the two men.

As they toiled along against the bleak wind, the old man sometimes whispered a word or two of encouragement to his faltering companion, but for the most part they went in silence. It was wiser. The old man pushed doggedly on, although he was feeling the strain of the young man's weight upon him. At last he heard the lapping of the river, and there within sight was the much-desired goal.

A long line of men stood shivering in the cold, none of them clothed for the

season, and some less than half clad. They were the city's unfortunates, too weak to breast the tide of adverse conditions. It were bootless to ask what brought them to this pass. One dare not say whether the cause of failure lay within themselves or whether the conditions we created proved too heavy a handicap in the race.

By the unwritten law of such occasions the late arrivals should have taken their places at the end of the long line to wait their turn for the bread and coffee which make the one meal of these wrecks of humanity. The old man had noted the gleam of the famished creature, so appalling to behold, in the eye of the starving young man. The smell of the coffee had intensified his pangs so that he was no longer human, but a wild beast in his craving for food. He, therefore, pushed him up to the front of the line.

Some of the hungry, freezing men opposed this move. It was contrary to the

rules of the game, but the old man silenced this opposition by a cry they all understood only too well: "He is starving; he can't wait!" Freely they made way for him whose need was greater than theirs, though until that moment they had thought their own supreme. The starving man was pushed and dragged along by his faithful companion, who once more raised his voice to cry to the attendants—"Give him food; he is starving; he smells the coffee; he can not wait. Give him food! Give him food!"

The words were almost a prayer uttered by a voice fraught with agony, as with one last mighty effort the old man pushed his companion forward where willing hands would minister to him. For less than a second, it seemed to the lookers-on, the old man stood wavering, then he fell. They stooped to raise him—he was dead. They carried him into the warm room and reverently covered the calm face, across which, in unmistakable lines, was written "Starvation."

The dark church towers still pointed



"Give him food; he is starving; he can not wait!"

heavenward; the storehouses still clasped their treasures in iron arms; the protectors of the city patroled their beats, and the skulking forms still hugged the shadows; beyond the dimly burning hall lights men and women—some with gentle, Christian hearts that would be touched and shocked in the morning—lay warmly asleep in New York that night as another Christ was crucified. None awakened as out upon the chilly night air went the Christ-spirit of the man who had given his last atom of strength, love and helpfulness to one whose need was sorer than his own.

When shall we learn that he who multiplieth possessions multiplieth troubles, and that the single use of things which we call our own is that they may be his who hath need of them?—Tom Hughes.

Don't make too much of the faults and failings of those around you—even be good to yourself and don't harry your soul over your own blunders and mistakes.—Ada C. Sweet.

Mother-Memories

MY HAIR was brown and my eyes bright when these memories commenced, and now I am old and gray. But when I close my eyes and listen back along the years, all the precious days seem very near and clear in my memory.

The little white house seems far more real than the room where I spend my days. It rises out of broad green fields, and the silver moonlight pours over it in a flood. Maple trees shelter it, vines cling to the windows, chrysanthemums nod gaily beside the brick walk, and across the road rustles the corn.

The first time I saw it, I was a bride, and the life that was to be lived there was just ahead, a beautiful dream. Now, the dream is behind me, but, oh, it was a thousand times more sweet and beautiful than even my heart had hoped. I can hear, as I listen, the patter of leaves as they fell from the maple trees that night; I catch again the faint odor of pansies, I hear our feet on the walk, as we went "home" together for the first time. And the joy of home-making wells up in my heart just as it did then.

The little white house was ready. A dear mother had been busy there, and the light shown on carpeted floors and dainty white curtains.

In the dining-room the table was laid for two, and each plate and glass and bit of silver was a gift from some loving heart, far away in the old home.

The days came and went. Every bit of work in that little home was done by one pair of hands, and lessons were learned there that will last as long as life—aye, longer. Love came and dwelt there, glad days and sad days, sickness

and health only made the two who loved more nearly one. Oh! such happy days!

Now, another day comes, and it stands out clear cut, shining white in the light of memory. Sunshine streamed over field and wood, but seemed to lay brightest on the house among the trees. Birds sang more sweetly there and the rioting vines swung gently against one shaded window. Summer's voice was in the air; Life and Love walked hand in hand.

For, with the coming of dawn, a little life had awakened, and everywhere could be felt the thrill of joy that the tiny, brown-eyed daughter had brought with her. Again, I see that little, little face on the pillow beside me and my husband's dear face bending over me.

Oh! what a wee creature to change the whole world in a day! How sweet to dream her future; to lie there, the long days of pain forgotten in these golden days of possession. Then the joy of once more going from room to room, of gathering the blossoms that were waiting for the baby, of caring for her, and watching the little helpless thing develop into a determined individual.

When life is happy, the days are so near alike that the years pile up before we know or think. And the little white house grew to be an old established home with other children to keep our dear "first-baby" company.

School-days came all too soon. The little path across the field was worn hard and smooth, and dinner-buckets seemed always waiting to be filled.

The fields echoed with children's laughter and the brook found playmates for its every mood. All too soon Love began to

call, and out from our home, into homes of their own went our babies.

Ah! the little white house grew quiet then, and large enough again, and father's shoulders bent a little more, and mother's hair was gray. Shadows were drawing nearer and nearer; they had almost touched the house; softly winter came and wrapped field and wood and blossoming flower in white.

The merry brook no longer sang, and the cold north wind moaned sadly down the chimney. When the pale winter moon peeped in at the sitting-room window, there was no longer a laughing group around the fireplace, but only two white-haired old people, whose chairs rocked slowly side by side.

But what if only two are left? 'Tis still home, for happiness grows with love, and love deepens with the years.

The shadows draw nearer; they close around the old home now and grow so dark that all the pictures fade. I see no longer, I hear nothing except the rushing of life and the rustling of the wings of Death's angel.

And when the darkness breaks, when I waken from the shock, he who made the old house home is gone. So the little white house is alone now—alone with tender memories, filled with happy dreams.

And I, too, am alone. A white-haired, old woman who can not realize where all the long, joyous years have gone; whose children are scattered far and wide; who can not comprehend that the sunshine has faded forever—that only in heaven will the roses of love bloom again for her, and again she will "go home."



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OUR YOUNG FOLKS' DEPARTMENT



A Busy Morning

By Tudor Jenks

TIMOTHY," said his father, just as they finished breakfast one Saturday morning, "I suppose you'll be taking the afternoon off?"

"I'd like to if you can spare me," said Timothy. "I've been working pretty steadily this week and I wanted to go into the woods with some of the boys; we—"

"Oh, all right!" said his father. "But you might clear up the garden a little this morning. It oughtn't to take you till much later than noon and then, maybe, you can put in a half hour or so on the tool-house. You've let it slide during the harvest-time. You'll have time for that?"

"Easy enough," said Timothy, delighted to get off so lightly.

So, fairly early, Timothy went to get the rake and shovel. He went out to the tool-house first, but the empty hooks showed him the rake wasn't in the right place, wherever else it might be. While glancing about to see where it could have got to, Timothy caught sight of a coil of wire that had fallen to the floor and was somewhat tangled.

"There!" he exclaimed. "I knew we had that size wire somewhere. [Joe [Joe was the hired man] told me there wasn't a yard of it on the place. Now, I'll just prove he's wrong. Joe's too sure of things!"]

So Timothy picked up the coil and began to pull it loose from the pile of rubbish that had been dumped upon it. It took some time to straighten out the kinks and to get the wire into a neat coil, but when it was done, Timothy hung it over his arm and started out to look for Joe.

"Where's Joe, mother?" he asked as he passed the kitchen door.

"I'm not sure, dear," said his mother and went on with tidying up the kitchen.

"Haven't you seen him?" Timothy insisted.

"Not since his breakfast," she replied. "But—wait a minute. I think he said he was going to mend the fence at the bottom of the garden. You might look there."

So Timothy started for the fence at the other end of the long garden and was lucky enough to find Joe still at work there.

Going up to him, Timothy held out the wire in triumph.

"There, Joe," said he, "you see I was right and you were wrong."

"Wrong about what?" Joe demanded, never looking up from his work.

"About this wire. You said there wasn't any of this size around the place. And here it is—a whole coil of it. I found it in the tool-house."

"Never said so," Joe said coolly. "I knew that wire was there all the time."

"But this is the right size," Timothy insisted.

"It's a size smaller and, besides, it ain't the right kind at all," Joe said, laying down his hammer and taking the wire for a closer look.

"How do you mean?" Timothy demanded. "This is the kind I was using to mend the fish-pole."

"You just put 'em side by side and you'll see the difference," Joe insisted. "Guess I know wire!"

"Well, I'm going to show you you're all wrong," Timothy insisted. "Where is the fish-pole?"

"Don't know," Joe replied. "I think you left it in the kitchen and your mother put it up in the attic. Said you oughter know better'n to leave it 'round. 'A place for everything and everything—'"

But Timothy had started to look for the fish-pole. He returned to the kitchen, but his mother had finished her work there and so, after shouting "Moth—er! Moth—er!" four or five times in vain, Timothy went to the sitting-room and found her dusting it.

"Say, mother," he began, "where'd you put my fish-pole—the one I was mending?"

"Goodness, Timothy," she exclaimed, "what can you want with a fishing-pole at this time of day. I thought you were going to tidy up the garden—"

"So I am," Timothy replied, "but I just want the pole to show Joe something. Do you know where it is?"

"In the attic, on the north side, just under the eaves."

So Timothy went up to look for it and there found a trunk open and one of his suits lying on the top.

"I told mother I didn't want that suit put away yet," Timothy grumbled impatiently. "I must tell her."

And down he ran to carry out this important errand.

"Mother, I don't want that suit of mine put away in

returned to the attic in a hurry, snatched the pole from the nails and started down-stairs. In a moment more he realized that he had only the upper joints of the pole and that the lowest joint, or butt, was in the tool-house. This meant another journey to the attic, to put away the pole; and then, having found the mended butt, Timothy started once more on his quest for Joe.

Joe meanwhile, having finished the fence-mending, had gone on a pressing errand to the village store and was nowhere to be found. Possibly Timothy would have still insisted on convincing Joe, except that when the coil of wire was compared with the mended pole, there seemed to be two differences between the wires—that on the pole was brass and the coil was copper, and Timothy was not quite certain that they agreed so well in size as he had thought.

Then he remembered there was a wire-gage in the tool-house and he resolved to test them. But on his way to the tool-house again he came across his younger brother Will, who was "playing horse" with the missing rake.

"Hello, Billy," Timothy said, "so you're the scalawag that took the rake? Come, hand it over, I've got to clear up the garden."

"Won't," said Billy, gripping his steed firmly and galloping away at his highest speed.

"But you must," said Timothy, dropping the wire and the pole and making after the fleeing cavalier. "I've been looking everywhere for it!" And he caught his brother and tried to wrest the rake from the clinging fingers. Poor Billy resorted to wild yelling and bawled out:

"You can't have it, Tim! Muvver said I could play with it. She did—truly!" and he hung on so firmly that Timothy did not like to force him. So he made off to the house to lay the case before the higher authority.

"Mother," he began as soon as he saw her, "Billy's got the rake and he won't let me have it to clean up the garden, as father told me to."

"But I don't like to take it from the child," said his mother gently. "Can't you get him something else? Besides, that's not the new rake. It's the old one, with half of the teeth out. You'd better use the new one."

"I didn't know there was a new one," said Timothy. "Where is it?"

"In the tool-house, I suppose," she replied, "but—there's the butcher's wagon at the gate. I must go."

Once more Timothy started for the tool-house, briskly, to make up for lost time and stumbled over the coil of wire left on the grass. Over he went and, throwing out his hands before him, struck the edge of the reel on the fishing-pole so as to cut his hand a little.

This, of course, required another visit to the house, where his mother bathed the cut, put on some absorbent cotton, arnica and a bandage, and generally cared for and petted the wounded hero.

Before this was all over, the factory whistles were heard blowing their chorus in the distant village to show that the noon-hour had come to put an end to Timothy's laborious and busy morning.

Some boys do not find even farming very hard work.



"There, Joe," said he, "you see I was right, and you were wrong."

camphor yet. I've got to wear that next week at the Grimsbys' picnic and now it will smell of camphor."

"I thought you'd wear the gray one," his mother replied.

"I can't," said Timothy positively. "Why, don't you remember that I tore a hole in the knee?"

"But I mended that so it doesn't show," his mother said patiently. "I think you'd better wear it. You know that all sorts of things happen at a picnic."

"Well, all right," was Timothy's answer and he turned away and started down-stairs, forgetting all about the fishing-pole till he had gone half-way back toward the tool-house. Then, laughing at his forgetfulness, he

Cousin Sally's Letter

DEAR BOYS AND GIRLS:—I suppose you think I have neglected you of late, don't you? But I was so busy getting ready to go away for a little rest that it was hard for me to find time to write to you as often as I should have liked. I spent my vacation in Maine, and one of these days, if space will allow, I am going to tell you a little about it.

When I got back to New York, I wish you could have seen the stack of letters on my desk. Why, I never saw so many in my life. There were letters from my little friends in every part of the country, and such nice ones. They just made me feel glad and happy to be back with you all again. I have returned from my holiday thoroughly rested and am most eager to begin our fall work and play. I have several new plans which I want to talk over with you a little later.

Be sure to enter this month's contest. I wish you would all try for the prizes. If you have tried and failed, try again. Don't give up, persevere and you'll win next time. Marconi would never have perfected the wireless if he had given up when things failed to go right at the very start. And Fulton would not have lived to see the Clermont steam up the Hudson if he had stopped work at the first rebuff. That's the way with you boys and girls. You must all try and keep on trying.

Faithfully always, COUSIN SALLY.

Cousin Sally's Club

EVERY day there are new members enrolled in our club. Don't you want to join, too? All cousins desiring a button of membership should inclose five cents and address Cousin Sally's Club, FARM AND FIRESIDE, 11 East 24th Street, New York City. Be sure to state age when writing.

Work By Our Boys and Girls

Let's Pretend

LET'S pretend the phlox are sailors
Dressed in suits of every hue,
And the tall red hollyhocks
Sentinels o'er the merry crew.

Let's pretend the dark red roses
Are the lanterns on the boat,
And the whole of mother's garden
Is the sea where gay ships float.

For the oars we'll have the larkspurs
Tall and slender, pink and blue,
And this portion of the garden
Is the big ship, tried and true.

Let's pretend this big black pansy
Is the anchor that is cast
To secure the flowery vessel
To the door-step safe and fast!
ELLEN HOWARD, Age Fifteen,
Baraboo, Wisconsin.

Raindrops

I LOVE the dear little raindrops,
Because when I go to bed
They fall on the roof and tree-tops
And rest my tired little head.

And when I get up in the morning
And look out of my window so bright,
I see that the dear little raindrops
Have been at work through the long,
long night.
Composed by
Clifford Wagner,
age seven, who
lives at Lancaster,
Ohio.



The Doll I Love Best

THE dolly that I love the best
Is very, very fair,
She has smiling eyes of deepest blue
And curly yellow hair.

Her face is always pleasant
And her manners always kind;
A sweeter dolly than my own
You will never, never find.
RHENA BENHOWER, Age Eight.

School is Over

VACATION-TIME is here once more
And I am lonesome, too.
The other boys live far away
And I don't have much to do.

I wonder why the fish won't bite
And why there's so much rain,
I am tired of staying in the house
With just my old Aunt Jane.

At school we boys have lots of fun.
There's ball and games to play.
I wish that school had not let out;
I'd like to go to-day.
HARRY FLETCHER, Age Eleven,
Delaware, Ohio.

Let's Pretend

LET'S pretend that we're grown up
And wear our mama's clothes;
And you and I and
Sally Tops
Will play that we
have beaux.
LORETTA MILLER,
Age Fifteen,
North Vernon,
Indiana.

The Letter-Box

MY DEAR COUSIN SALLY:—

When my sister and I came home from a drive yesterday, I asked my little brother if there was any mail for us and when he said that I had received a prize from Cousin Sally, you may be sure that I hurried into the house just as soon as I could. When I saw the book I fell in love with it at once and I want to thank you very, very much for it. Longfellow is one of my favorites and as I do not have any of his works except "Evangeline," I appreciate "Tales of a Wayside Inn."

I like the inscription in your own handwriting as well as anything else; the gift seems more personal.

I like our department, especially when there are letters from the cousins and a good long one from you.

Thanking you again for the dainty gift, I am,

Your loving cousin,
ANNA L. FLORY,
Pequea Creek, Pennsylvania.

Monthly Prize Contest

THIS month our prizes are for verses on the following subjects: "The Woods in Fall" or "Chestnutting" or "When the Leaves Turn Red and Gold" or "School Lessons."

Do not write more than five verses. Write in ink, on one side of the paper only, with your name, age and address in the upper corner.

The contest is open to all boys and girls seventeen years of age and under. The poem must be indorsed by parent or guardian to show that it is your own work.

For the ten best poems we will give prizes of books and water-color paints in Japanned tin. The contest closes September 29th. Address Cousin Sally, Care of FARM AND FIRESIDE, 11 East 24th Street, New York City.

ANNOUNCEMENT

Farm and Fireside's 1911 Premium Catalogue

Ready for Distribution
October First

We want every FARM AND FIRESIDE reader to have a copy of our new catalogue. It is brimful of useful necessities, amusing games and toys, instructive books—in fact, there is something for every member of the family, young and old.

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You will surely want several of the choice articles offered in this new catalogue, either for yourself or for presents to members of the family or friends. Remember, Christmas is not far away. Why pay high retail prices for your presents when you can secure

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Springfield, Ohio

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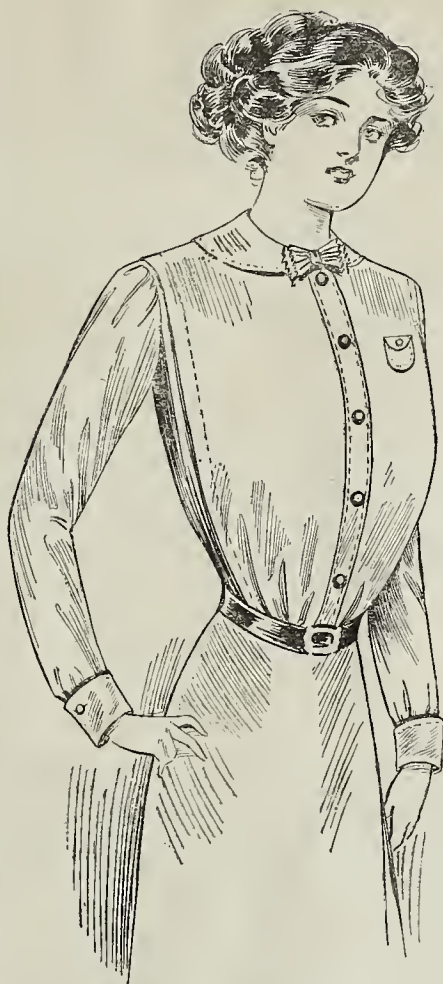
My Name is.....

My Address is.....

F. F. 1-10-10.

Dressmaking Lesson

By Miss Gould



No. 1577—Tailored Shirt-Waist With
Rolling Collar

Pattern cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and seven eighths yards of twenty-four inch material, or two and one fourth yards of thirty-six inch material

THIS severely tailored shirt-waist shows the new rolling collar which will be a feature of many of the waists for autumn. This model will look particularly smart if made of black satin. However, it is a good design for all the heavier linen and cotton fabrics.

The pattern No. 1577, Tailored Shirt-Waist With Rolling Collar, is cut in six sizes, for 32, 34, 36, 38, 40 and 42 inch bust measures. The pattern costs ten cents and may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

The pattern envelope contains eight pieces which are lettered as follows: The front V, the back T, the collar L, the belt X, the pocket I, the sleeve K, the band cuff J and the flaring cuff F. The letters are perforated through each piece of the pattern in order to identify it and make it impossible for any one—no matter how little they may know about sewing—to mistake one piece of the pattern for another.

In cutting out the shirt-waist lay the edges of the back, the belt and the collar, marked by triple crosses, on a lengthwise fold of the material. Place the fronts, pocket, sleeves and both cuffs with the line of large round perforations in each lengthwise of the goods.

Be sure that all the perforations are carefully marked and all the notches cut out before removing the pattern pieces from the material. Cut the right front like the pattern. There is no plait on the left front, so cut the left front off by notches.

To Make the Shirt-Waist

Form the plaits on the shoulder in front by bringing the corresponding lines of triangle perforations together. Stitch on these lines, turn the plaits backward and press them flat. Then join the fronts and back by corresponding notches.

Turn a one-inch hem on the left front. Turn a hem on the right front by notches and stitch one fourth of an inch in from the edge of the hem. Crease the right front on the long line of triangle perforations and stitch one fourth of an inch in from the edge of the crease to form the tuck. Include the loose edge of the hem in this tuck.

Gather at the waistline between double square perforations. Arrange the belt on the under side along the line of square perforations. Match the centers of the waist and belt, back and front, and bring the large round perforations in the belt to the under-arm seams. Pin the belt securely to position, distributing the fullness evenly.

It is well to try on the waist after the belt has been pinned to see if the fullness has been arranged in a becoming manner. When the bust is large and you require a close fit under the arms, it is often better to draw the fullness nearer the center,

back and front, leaving more plain space under the arms to give a close-fitting effect.

If, on the other hand, the figure is slender, it is sometimes more becoming to have a little fullness under the arm. In this case, gather all around on the line of square perforations.

Work buttonholes in the right front in the center of the box-plait, indicated by line of large round perforations, and sew buttons on the edge of the left front. Then lap the fronts and button through the plait.

Join the collar to the neck of the waist as notched. If the collar is made double, stitch the two thicknesses of the collar together at the front and lower edges. Then slip the neck edge of the waist in between the two parts of the collar and stitch securely to position.

Turn the lap on the pocket by notches and stitch the pocket on the left front, bringing the upper edge of the pocket to the line of small round perforations. If the material has a right and wrong side, it will be necessary to face the lap.

Close the inside seam of the sleeve as notched. Slash the sleeve at the back on the line of small round perforations and face the edges of the opening.

Gather the sleeve at upper and lower edges between double crosses. Join the band cuff to the lower edge of the sleeve as notched. Join the flaring cuff to the band cuff by double notches.

When the material in the waist is heavy, the band cuffs may be made of only one thickness of material, and the flaring cuffs lined with soft silk or made single and just turned in at the edges and machine stitched. Otherwise both band and flaring cuffs may be made double.

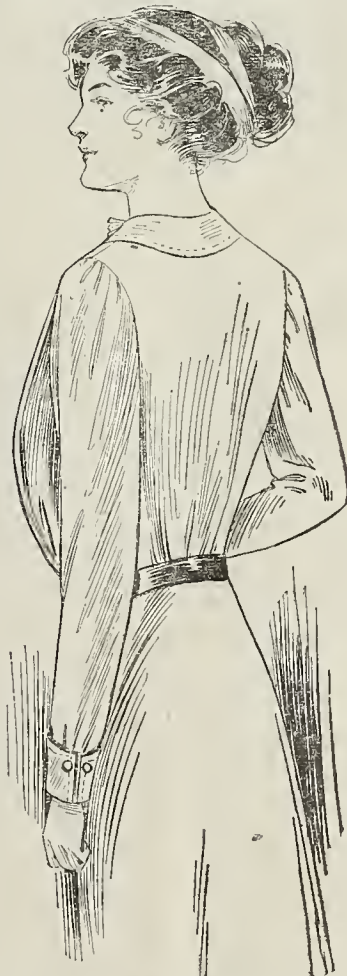
Hold the sleeve toward you when arranging it in the arms-eye. Place the seam in the sleeve at the notch in the front of the waist and bring the notch in the top of the sleeve to the shoulder seam. Pin first at these two points. Then pin the plain part of the sleeve smoothly in the arms-eye.

Draw up the gathers closely to fit the remaining space. Distribute the fullness evenly and pin carefully before basting the sleeve in the arms-eye.

Use plenty of pins in doing the work, because the arranging of the sleeve in the arms-eye is one of the most difficult parts of the whole waist. If the pins are put in securely, they will hold the sleeve in place while you are basting around the arms-eye.

Three-eighths-of-an-inch seam is allowed on all edges of this pattern, except at the shoulder and under arm, where one inch is allowed, designated by lines of small round perforations.

Miss Gould will be glad to answer any questions pertaining to home dressmaking which may perplex the readers of Farm and Fireside. She will send by return mail a personal letter to the writer if a stamped and self-addressed envelope is inclosed. Direct all letters to Miss Gould's Dressmaking Department, care of Farm and Fireside, 11 East 24th Street, New York City



Showing the back view of pattern No. 1577. The price of this shirt-waist pattern is ten cents. Order from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City

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A Cincinnati traveler says: "About a year ago my stomach got in a bad way. I had a headache most of the time and suffered misery. For several months I ran down until I lost about 70 pounds in weight and finally had to give up a good position and go home. Any food that I might use seemed to nauseate me.

"My wife, hardly knowing what to do, one day brought home a package of Grape-Nuts food and coaxed me to try it. I told her it was no use but finally to humor her I tried a little and they just struck my taste. It was the first food that I had eaten in nearly a year that did not cause any suffering.

"Well, to make a long story short, I began to improve and stuck to Grape-Nuts. I went up from 135 pounds in December to 194 pounds the following October.

"My brain is clear, blood all right and appetite too much for any man's pocket-book. In fact, I am thoroughly made over and owe it all to Grape-Nuts. I talk so much about what Grape-Nuts will do that some of the men on the road have nicknamed me 'Grape-Nuts,' but I stand to-day a healthy, rosy-cheeked man—a pretty good example of what the right kind of food will do.

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The Housewife's Letter-Box

We shall be glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. We want this department to prove helpful to our readers, and from the letters we have received we feel sure that our aims have been realized. While there is no payment made for contributions to these columns, still our readers may feel that their help and assistance is doing a great deal for others. All inquiries and answers should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

Questions Asked

Will some one please tell me—

How to make two or three loaves of white bread? Please give full directions, as I can't make bread at all.

AN OHIO LADY.

How to remove mildew from muslin?

MISS L. W., Ohio.

How to brighten galvanized ware and keep it clean? How to remove weed stains from the hands?

I. S., Oregon.

How to make a good washing fluid or compound that will not fade or injure the clothes?

MRS. E. C. B., Ohio.

How to dye a light gray felt hat black?

A SUBSCRIBER, N. C.

How to pickle cauliflower?

MRS. P. K., Illinois.

A good recipe for making cream cheese?

MRS. L. W. F., Arizona.

How to make dill pickles?

MRS. A. H. H., Nebraska.

How to get rid of the cucumber pest that destroys the vines after they have grown thrifty a few weeks; also, how to restore old spotted lace to its natural color? I would like to tell the readers of the Letter-Box that cabbage-worms can not live on cabbage which is well watered daily.

MRS. F. R. C., California.

What to do? Recently I have had trouble with my bread. I usually bake three small loaves at a time, and it is light and sweet, but on the second day it begins to sour and sticks to the knife. We can not eat it. I have tried keeping it in stone jars in the coolest place I could find, have also tried different kinds of yeast, but still it sours the second day. Can some one tell me what is the matter?

MRS. C. B., Illinois.

Will some reader please send me patterns of patchwork—old-fashioned or new designs?

MRS. E. J.

Mrs. C. M. E., Ohio, is anxious to obtain a pattern for a "sunburst" quilt block in large squares made of five colors; pink, blue, green, yellow and lavender. Can some of our readers supply her with the pattern?

I. B. C., Illinois, would appreciate a recipe for drying green beans and one for canning cucumber pickles.

Mrs. J. D., Michigan, would be glad to have some reader send her patterns in cross-stitch for gingham aprons and children's dresses.

Will Mrs. M. H. W., who contributed recipe for making syrup from granulated sugar, please send me her name and address?

EDITOR OF LETTER-BOX.

Questions Answered

For Mrs. E. E. C., Mass

Suggestions for getting rid of ants were printed on the "Household" page in the July 25th issue.

One reader says that cucumber-peelings scattered around where the ants are will drive them away in a short time.

Quince-Honey, for Mrs. A., Ohio

One pint of granulated sugar, with just a little water. Let boil until it strings off spoon; then add one grated quince (not peeled) and boil fifteen minutes.

MRS. A. B., Franklin.

For a Fireside Reader, Indiana

To prepare lentils for soup, cook in hot or cold water until tender. Season with salt and pepper, and put a little cream in them.

For lentil roast, cook them as for soup. Take two cupfuls of bread-crumbs, moisten with warm water, add salt, pepper and sage to taste, then the lentils and beat in one egg. Bake about one hour. This is delicious.

MRS. C. G. C., Washington.

Grape-Wine, for Mrs. J. A. W., New York

To every twenty pounds of ripe grapes allow ten pounds of sugar and six quarts of boiling water. Mash the grapes and pour on the boiling water. Let it stand in the pan for three days, taking care to keep it covered so as to exclude all dust. Strain the fruit and juice, and return the juice to the jar. Add the sugar and let it remain until fermentation has ceased. Take the scum off, strain again and bottle.

Lady Baltimore Cake, for Mrs. E. W. D.,

New Mexico

Here is a South Carolina recipe for this cake:

Two thirds of a cupful of butter, five eggs, two cupfuls of sugar, four cupfuls of flour, one half cupful of rich milk, two level teaspoonfuls of cream of tartar and one level teaspoonful of soda. Cream half the sugar with the butter, beat the remaining sugar in the yolks of the eggs, and sift the cream of tartar and the soda twice through the flour; beat the eggs and sugar together with the butter and sugar, add the milk slowly, and finally beat in the flour and stiffly beaten whites of the eggs. Flavor half this mixture with rose, and into the other half beat one teaspoonful of powdered cinnamon, one teaspoonful of powdered cloves and one grated nutmeg, and flavor with vanilla, lemon or almond; bake in four layer-cake pans—two white layers and two spiced layers.

For the filling cut fine one cupful of seeded raisins, shred thin half a citron melon, grate one small cocoanut and blanch three fourths of a pound of almonds; make an ordinary boiled icing, and into it beat all these ingredients save the almonds. Put the mixture thickly between the layers, and finish the top layer—which should be a white one—with sprinkled powdered sugar and the almonds stuck in porcupine wise. The measuring-cups are ordinary coffee-cups and are filled just level.

Belts of Darned Netting

By Mae Y. Mahaffy

FOR those who are desirous of finding something a little out of the ordinary in the way of a dress accessory, nothing could be more effective than the new belts made of darned netting. Here are two very attractive ideas for darning the net. The material used for the belts is Brussels net, and if it is impossible to buy the color desired, the net may be dyed. As a rule, however, the darning looks more effective worked on white or cream. For darning, the stranded cotton is preferable, using all the strands at once, although any softly-twisted variety that will fill up the meshes of the net will serve the purpose as well. A blunt needle should be used for the work.

The width and length of the belt must be gaged by the worker. Usually from one to two inches is wide enough when finished. A little extra should be allowed at each side for turning in. The length may be just right for fitting into buckles or somewhat longer, with the ends pointed, and held in place with a belt pin.

Dull blue net with green and gold floss are good color combinations. A belt worked in lavender and white would be effective worn with a lavender costume.

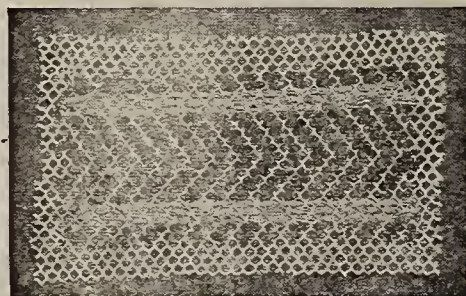
Draw the strands of floss in and out of the holes of the net for the length of the belt, splicing when necessary by running in the same holes for a short space. In the second row commence one hole farther than at first, so that the stitches seem just a little in advance of the others. This plan is followed for a given distance, and then the stitches are made to gradually drop back to cause the net's mesh threads to zigzag back and forth across the work. This can be seen in the samples here illustrated.

In No. 1, two rows of dark cotton, three of light, eleven of dark, three of light and two of dark make up the belt, the meshes changing with the colors, and again in the center of the dark space of eleven rows.

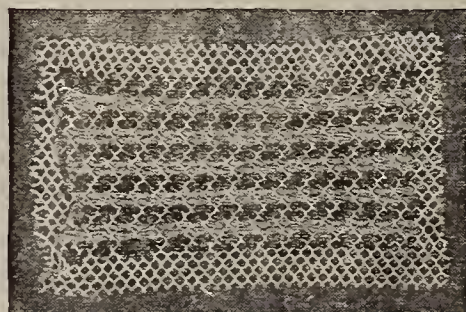
In No. 2, two rows of one shade and two of another alternate in like manner.

In working, various ideas for patterns will come to any one who is interested in the work. If the zigzag effect is not liked, the meshes may be made to slant diagonally across the entire breadth regardless of colors.

When the strip for the belt is made, line it with silk and turn in the edges of the net just to the outer rows of floss.



No. 1—Zigzag design for darning net for belts



No. 2—Another attractive design for a net belt

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THE NATIONAL FARM PAPER



ESTABLISHED
1877

SEPTEMBER 25
1910

The Lamb

Little lamb, who made thee?
Dost thou know who made thee,
Gave thee life and bade thee feed
By the stream and o'er the mead;
Gave thee clothing of delight,
Softest clothing, woolly, bright;
Gave thee such a tender voice,
Making all the vales rejoice?
Little lamb, who made thee?
Dost thou know who made thee?

Little lamb, I'll tell thee;
Little lamb, I'll tell thee:
He is called by thy name,
For He calls Himself a lamb.
He is meek and He is mild,
He became a little child.
I a child and thou a lamb
We are called by His name.
Little lamb, God bless thee!
Little lamb, God bless thee!

WILLIAM BLAKE.



A Visit With the Editor

IN HIS first public speech after coming home from Africa, at Utica, New York, on August 23d, Colonel Roosevelt addressed the union picnic of the Herkimer and Oneida County Granges. After paying his respects to Vice-President Sherman by a side-wind of compliment to the V. P.'s most active political foe, the colonel proceeded to discuss rural life and national problems. It is rather pleasing to find him so completely in agreement with things long advocated in FARM AND FIRESIDE.

His speech is a plea for conservation—the conservation of Gifford Pinchot, rather than that of Secretary Ballinger. He spoke for the conservation of the best in our rural life, by making rural life the best life for the ablest men and women, and the brightest boys and girls.

He spoke for scientific farming—scientific in theory and scientific in practice—the hard common-sense sort of science. He recommended to the farmers membership in some farmers' organization. These are things for which we have been laboring for years. The colonel said a word for the country church—and it reminds us of what this page has said within the past two months and of the articles on the country church which we shall give you within the next few weeks by one of the few really successful rural pastors of the United States. Mr. Roosevelt talked to the farmers about the necessity of making the farm a place where women may live pleasantly—and there struck upon one of the greatest needs of the farm. We are promised articles on this phase of rural life soon, by two women whose names will be familiar to you all—Caroline L. Hunt, editor of the Home and Education Department of La Follette's Weekly, and the author of several Agricultural Department bulletins on home and educational economics, and Mrs. Kate V. Saint-Maur, a farmer's wife who is a writer of the first rank on all matters relating to the home. It is good to find Colonel Roosevelt so intelligently awake to the real interests of the nation as embodied in the welfare of its farms.

He spoke of the conservation of the fertility of the soil as taking care of "the physical asset more valuable than any other." In this connection have you thought of the importance of the series of articles giving actual experiences in redeeming abandoned and run-down farms which we have published in recent issues of FARM AND FIRESIDE? It seems to me that nothing has been printed anywhere in the past year more really important than these stories of success under difficulties. For the run-down and abandoned farm is really your farm—if you don't look out. The treatment that will restore a run-down farm will keep a good farm fertile. It is easier to begin the treatment now than to wait for the pinch of need. The farming that will pay on a run-down farm will pay better on a good one. There is no region—in the corn belt, the wheat belt or the cotton belt—that doesn't need the same treatment year by year—in the right sort of way. As to the details, each farmer must judge for himself—but as to the treatment, there are scarcely any exceptions.

Let's go over those articles and get an idea of what did the business in each case—then each of us should be able to judge as to wherein he is failing to do the right thing by his own land.

Farm 1 is in southern New York. It was run down by continuous cropping, in which only the small fields planted to corn were manured. The fields had become mossy, and the growing of clover was impossible. The cure was made by liming, fall plowing and the use of light applications of manure. It now produces good crops of both grain and hay.

Farm 2. This is in southern Tennessee. The deterioration was caused by continuous cropping in corn. The land was ridged up and washed into gullies by the rains of winter. The manure produced on the place was wasted. It would not yield over twenty bushels of corn to the acre, and clover would not grow on it. The man who rejuvenated it did so by plowing down crops of cow-peas and other green manures, saved and spread his manure, sowed the washed slopes in grass and now gets crops of sixty bushels of corn to the acre.

Farm 3. Southern Illinois. It had been long rented, farmed without rotations, plowed up-and-down-hill and so was badly washed, and become so bad that it could no longer be rented. A neighboring farmer took it, planted a new orchard, rotated the level lands in clover and grain, green manured the hillsides with cow-peas and then sowed them in grass, brought it back to such fertility that it yielded sixty-bushel corn, and sold it for a hundred per cent. profit.

Farm 4. This is in western Kentucky. We are not told how its fertility had been assassinated; but it had gone back to gullies and briers. An inexperienced Irish weaver, with no capital, by carefully husbanding the manure, by deep plowing and frequent seeding to grass and clover, and with no commercial fertilizers except from fifty to one hundred pounds per acre to start his tobacco-plants, completely restored the land to fertility.

Farm 5. This northern Alabama farm through mismanagement had become gullied by erosion, and the land was hard and unproductive. A stranger to that community took it, and by deep plowing and the use of manure, restored it to fertility to such an extent that the average crop on it was doubled.

Farm 6. Here we get into east central Kansas—rather far west for abandoned farms. The land had had poor tillage and no manure. The fields were weedy and the corn poor. An Illinois farmer bought it, bought some

manure for it, and made more, adopted a humus-producing tillage, and now grows forty bushels of corn without additional manure, and sixty with it.

Farm 7. Northeast Ohio. Restored from a condition in which it would not grow a half crop by rotation, tiling and manure. In this case the tiling was paid for on part of the land by the first crop of potatoes after the drainage was effective.

Farm 8. This place in southern Maryland west of the Chesapeake was so deteriorated that it was thought useless to farm it. An advanced system of agriculture was adopted, with the plowing under of legumes, barn manure, commercial fertilizers and rotation of crops, and the land now makes forty-bushel wheat and four-ton hay crops.

Farm 9. West central Indiana. This farm was seemingly ruined by lazy owners and poor renters—it was badly gullied and overgrown with brush. A farmer with little capital assumed the mortgage and paid something for the equity. He used manure to start his crops, planted leguminous crops, fed all the crops on the farm and bought feed for his cows. He has no trouble to raise sixty-bushel corn, now, and is out of debt.

Farm 10. This is in south central Virginia, and the ruin was caused by continuous cropping by renters. It was almost barren of fertility. A Western farmer of very small means took it, used cow-peas for green manure, bought a little commercial fertilizer, saved manure and adopted a rotation system. The land has more than doubled in value.

Farm 11. Here we have a northeast Kentucky place run down by continuous cropping in corn. The hill land was barren and the buildings in ruins almost. A German bought it and was so lacking in capital that he had to go in debt three hundred dollars for tools and equipment. He used no commercial fertilizer, but bought some manure in town. His wife met most of the family expenses with butter and eggs. He put some of the land in grass and on the rest adopted a good rotation system and, of course, used all his own manures. The farm was completely restored in fertility, both man and wife had good bank accounts when they passed away, and after many years the farm is still a fine one.

Farm 12. Clouded title and the absence of conscientious management brought this farm in southern New York to a state of abandonment to brush and weeds. The man who restored it had no capital, but possessed a family of working habits. Hard work—mostly clearing up—and sensible management made the farm double in value in three years. In this case the soil was good.

Farm 13. The land had gone back to brush and, though in central Tennessee, sold for under thirty dollars an acre. The man who bought it had little capital; but he cleaned up the place, clovered it, kept all the stock he could and used the manure from it. He made a living from the start and the land value increased fifty per cent. the first year.

Farm 14. Here we find a place in south central Texas gone to weeds and fallen very low in productiveness. The farmer who bought it gave it thorough cultivation, but used no commercial fertilizers. He manured it thinly. He made fine crops from the first and prospered so as to be able to buy more land. Evidently a case like Farm 13, of the soil being better than the people in the neighborhood thought.

Farm 15. Pennsylvania farming is proverbially good, but this southwest Pennsylvania farm is said to have gone back through shiftlessness. The crops were too poor to pay the taxes. A good farmer bought it, and began to plow deep. He used very little commercial fertilizer; but he used all the manure he could produce, limed the ground and went into clover. He now grows crops of twenty-five bushels of wheat to the acre and ninety to a hundred bushels of corn.

Farm 16. Another Maryland farm also is ruined by continuous cropping without manure. Some of the fields are described as quite infertile and the gullies show where the soil has been washed away. A trained farmer—a member of the Grange—by the use of better machinery, rotations, barn manure and green manure, brought it back to a high state of fertility.

Farm 17. Vermont. Drunkenness of the owner and lack of planning had brought the buildings to wreck and the farm to a ruin of weeds and brush. A city man—but one who had had farm experience—went "back to the land" and on this "abandoned" place went into fruit and winter dairying. While he has made no bumper or record crops, he is making a fair income from it.

Most of these stories have already appeared in FARM AND FIRESIDE. A few are still to be published. Every one is worth intensive study.

Colonel Roosevelt speaks for "conservation" of our soils. Here we have something stronger than conservation, restoration. The secret? Manure, lime, leguminous crops, plowing green manures down, deep plowing, rotation and, when necessary, commercial fertilizers.

In other words, well-directed labor. If they have restored these seventeen farms, why not use them to keep your good farms up? How does it make you feel as you read these plain experiences narrated by plain farmers? As for me, it cheers me after seeing how badly my West Virginia hillsides have washed this summer.

Robert L. Grier

FARM AND FIRESIDE announces a big special HARVEST HOME NUMBER October Tenth

F. D. COBURN

Secretary of the Kansas State Board of Agriculture, writes the leading article on
"Corn, the National Crop"

"How Did You Market the Year's Crops?"
A meaty discussion of the selling question,
By E. L. VINCENT

A Review of the Crop Year of 1910 by five
experts on the nation's markets

Other great features in every department will
make this a banner issue, a fitting opening
for a new volume—for
FARM AND FIRESIDE'S
THIRTY-FOURTH YEAR OF SUCCESS



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What the South Offers the Northern Farmer

By A. M. St. Cyr

TILLERS of the soil are essentially migratory and the American farmer from his greater adaptability to conditions and an inherent knack for surmounting obstacles is the most nomadic of the tillers of the earth. From the time that the Reverend Thomas Hooker led the first "immigration to the west"—then the Connecticut Valley—until the present, the movement to find new homes under better conditions has been westward, ever westward. The migration of early manhood has been so universal that very few American farmers at the end of a life of toil "sleep with their fathers." But the West once spoken of as "boundless" has filled up; even the great Western desert has been made fertile by irrigation, the wave of immigration has reached the mountains and there are no more cheap homes to be had. Averse to leaving the domain of Uncle Sam for Canada on the north or Mexico on the south, the tide has from necessity turned to the lands of the southern United States.

While in general intelligence the American farmer leads the world, technical information in his own calling is confined to a comparative narrow zone of latitude. A Wisconsin man, familiar with the cultivation of sorghum, invented a machine to plant the seed of sugar-cane and was dumfounded when he learned that the stalks of sugar-cane are planted and not the seed. While this is an extreme case it is a true one and will seem less imaginary to the Northern farmer who will take the time for a retrospect of what he really knows of the routine details of raising cotton.

The South of to-day is really an inviting field to the immigrant, a land of boundless possibilities, but, as "fake" gold-mines flourish best near the good ones, there are many chances of getting stung even in regions of great promise. A recent issue of the "Sunday Editions" in one city alone contained seductive ads. of no less than fifteen boom-on-paper schemes of colonization in the South. Every product from Florida oranges to Texas pecans promised a fortune to the investor in a small tract and "get rich on ten acres without work" was the grand harmonic chord of all. One circular went so far as to recommend peach-growing on their land as a specific lazy man's job.

Away back in the past is the time when farmers were the customers for gold bricks and patent right territory, and these ads. are for the "near-farmers," the men who will never get any nearer to a farm than a few payments on the installment plan. Recently the writer was requested by the editor of a Sunday newspaper to find and write up a colony that had made good within the limits of a certain state. Of eleven managers of colonization schemes not one could point to a success.

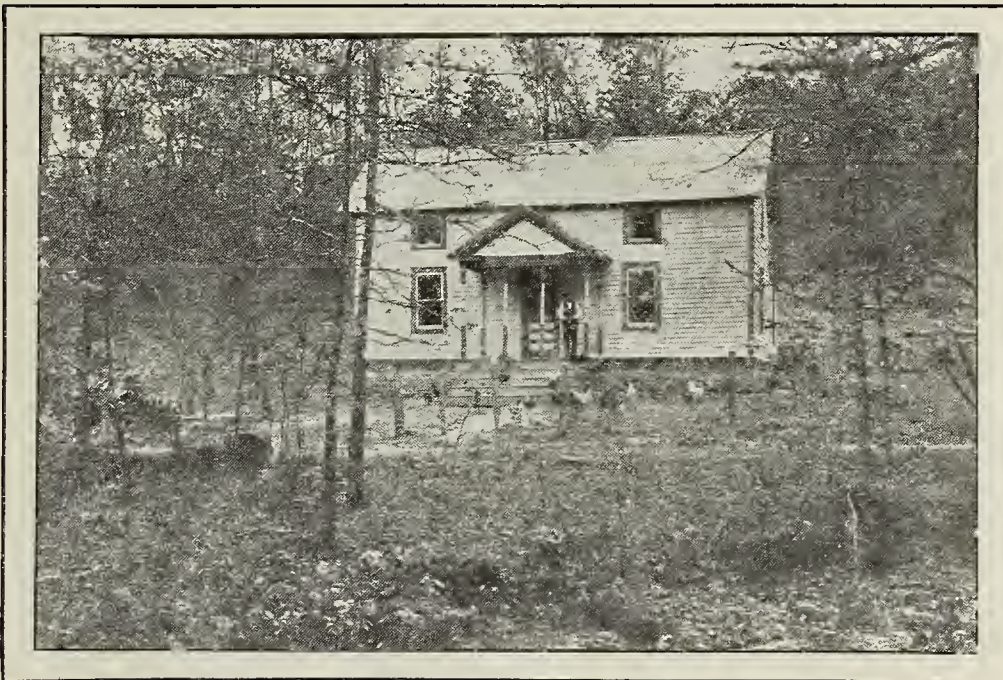
Look Well Before You Leap

This article is not written for the man who can buy a large plantation nor for the clerk or salary man of the city who is inoculated with the "back to the farm" virus, but for the average practical farmer or farmer's son in the North who wishes to branch out where there are larger possibilities than home affords.

Whether the funds for the immigration come from the sale of a smaller Northern farm or an allowance from the profits of the old farm, the great majority will want to make a substantial cash payment and make the land pay for itself with future crops; and right here is a rule so obvious and so true that it may well be called golden: "If you can not pay for good land with the crops it yields, you can never pay for poor."

Eighty acres of good land at thirty dollars per acre, one half cash, can be more easily paid for with its products than two hundred of poor land at ten dollars per acre on the same terms. Common prudence that suggests careful investigation before investment in anything is doubly needed in buying a future home. Too many take advantage of the twenty-five-day limit homeseeker's rates and with the cursory examination that the short time allows look over farms or tracts "marked up" in price for the occasion and invest without really knowing anything of the new conditions under which they must till the soil.

A case in point: The representatives of a colony of sixteen families visited the South to find a location. In



A Start on Cut-Over Land

the hasty examination that the limited time allowed they could see but few of the opportunities that were really in the region they visited and noted no significance in the fact that every farm they saw was for sale. With no deeper inquiry than the infatuated man makes in selecting a wife, they bought homes. In twelve months every one of them would have sold out for sixty per cent. of what his farm cost. Once immigration to the South is decided on, the best investment toward the new home is to go there and thoroughly "spy out the land" by renting for the first year. Volumes of literature on the subject will not give the information that can be gained by one year of actual experience and the loss due to ignorance of conditions will be shared with the landlord. Bargains that would be overlooked in a hasty search may be found with a year in which to look for them.

The topography of that part of the South that is inviting immigration embraces three classes in as many regions: The gulf basin, comprising a belt of flat land nearly five hundred miles across extending from Mexico around to the Atlantic; the foothills of the Ozarks, and the southern extremity of the Appalachian chain and the true mountain lands in these two ranges. The bottom land along the rivers that drain the gulf and the Atlantic slopes is as fertile as the best Illinois prairies, but liable to overflow and infested with malaria. Along the larger rivers the land was usually laid out in large plantations and but little of it is now within the reach of the small farmer. In the flat lands, that have an almost imperceptible slope upward to the foothills, the soil is what the Northern farmer would call thin. It will yield when first cleared from thirty to fifty bushels of corn or six to ten hundred pounds of seed-cotton to the acre and must be intelligently cultivated, or it rapidly wears out. Many old fields covered with persimmon, pine and sassafras, that can be seen from the train, are silent, but potent, reminders of what ignorant cultivation has done.

Those fields are relics of the time when the small farmer in the South led an almost nomadic life. He settled on a piece of land, "worked it for all it was worth" for a few crops, gave nothing back to the soil and found it easier to clear a new field than to restore the old one. In fact, when he left it, the soil was beyond redemption.

A few years ago when "intensive farming" was a fad, great results were promised from heavy fertilization of such worn-out land. But impoverished land becomes so sensitive to drought when highly fertilized that the number of total failures for want of rain at the right time outweighs the profits of big crops in wet years; moreover, intense fertilization is apt to "burn out" the light sandy soil that prevails here. It is true that an experimental acre at an agricultural college will show different results from this, but the care and labor bestowed on a college farm plot is impossible to the man who farms eighty or even forty acres. The best system of building-up land in the

South, as elsewhere, is by careful rotation of crops consistently followed.

In the hill lands of the South, with their clear skies, good water and healthful and invigorating air, mere existence is a pleasure. Land is cheap, but the fertile soil is in small patches and very liable to wash away. The hills fulfil their promise of a good and independent living to the small farmer, but hold out hopes of but little else.

Poor Richard in quaint phrase portrays the loss due to removal, but did not point out the danger of loss to a farmer who changes from a crop with which he is acquainted to a new one. Few of those immigrating to a new location can endure a loss additional to that entailed in moving and the man who is a success in raising a particular crop had better confine his industry to that for the first year or until he learns by observation how other crops are successfully grown. Learning climatic peculiarities in his new home will leave no time for experiment with crops of which he knows nothing. An Illinois man wishing to remove to Arkansas in mid-summer bought a prospective cotton crop. What cotton he made cost him at the rate of one thousand dollars a bale.

In spite of the wail of the native cotton-grower that there is no money in the crop, cotton yields a fair return for the labor, but the Northern man who tries it for his first crop is apt to fail.

While the many colonization schemes whose promoters are now exploiting the South are not by any means all "fakes," the location of the five and ten acre tracts determine their value. If convenient to good markets, either by proximity to large towns or on through lines of railway, a moderate-sized family can live and lay by something for a rainy day on ten acres, but truck farming is a trade by itself that must be learned by experience. The writer has shipped string beans six hundred miles at a good profit, but the trouble of getting help just when it was needed caused him to fall back on corn and cotton.

When the railroads first penetrated the great West and Northwest, the inducements offered to settlers were exploited by a class of railroad land agents whose cheek and mendacity passed into proverbs. The great Western lines have abandoned this method of bringing their territory into notice; the great Southern lines never adopted it. They wish immigrants into their territory to succeed and to that end every branch of agriculture in the region they serve is in charge of an expert practical farmer who can give wholesome advice as to the products and possibilities of any section they offer for homesteading.

Learning the Seasons Over Again

Certainly the best time to migrate South is in the autumn, for the mild Southern winter is a good time to clear and fence and to pass through that imperceptible change, unexplained by any school of physis, known as "getting acclimated." An average Northern man will take with him sufficient energy and industry to succeed anywhere, but he will also need a goodly supply of patience. Accustomed to seeing spring ushered in with a rush and green verdure following fast after the disappearing snows, he will be bewildered by the long flirtation while "winter lingers in the lap of spring" and likely plant prematurely. Temptation to start the plow in January, when the temperature is far above freezing and the ground bare, is strong, and if the ground is deeply harrowed just before planting, the early plowing has all the good effect of turning the soil in the fall, but even a semi-tropical climate can not be forced and the later planting is the easier cultivated and averages a better crop. There is a month more at each end of the growing season in latitude thirty-four than in forty, but the climate that gives the farmer eight months in which to grow a crop allows the weeds two months longer to come to full maturity. A corn-field "laid by" perfectly clear of weeds will grow a record-breaking crop of burs before the frosts of November kill vegetation. Casual visitors are apt to note the condition of weed-grown fields and without allowance for the cause render the unwarranted verdict of slothful cultivation.

[CONCLUDED ON PAGE 5]

Is Cattle Tuberculosis Transmissible to Man?

Science Has Established the Final Proof—By Dr. Mazyck P. Ravenel

A BRIEF history is not only important, but interesting in considering this subject. The germ of tuberculosis was discovered by Koch in 1882. Before Koch's time Villemin had showed by experiments on animals that the disease was communicable. Koch commended his methods and stated that he had "proved experimentally the identity of the latter disease (bovine tuberculosis) with human tuberculosis." He says also as a result of his own experiments: "The perfect identity and unity of the tuberculous process in different kinds of animals can not be doubted." He further stated that he had not been able to demonstrate any differences in the effect of inoculation with material from different varieties of the tuberculous process including "Perlsucht and other forms of animal tuberculosis." He also said, "it is certain that the milk of tuberculous animals may give rise to an infection." The opinion of Koch was confirmed by all experimenters and the identity of tuberculosis as seen in different parts of the body and in different animals was regarded as settled.

The result of all this work was an almost universal belief that cattle tuberculosis could be transmitted to mankind and that the milk and the meat of such animals were dangerous. In practically all countries this danger was recognized and laws were made designed to protect the people from such infection.

In 1896 Dr. Theobald Smith made investigations which showed differences between the germs derived from human tuberculosis on the one hand, and cattle tuberculosis on the other. The chief difference, however, was that the germs from cattle were tremendously more poisonous for experimental animals than the germs from man.

In 1901 Koch announced that he had made further experiments which confirmed the results of Dr. Theobald Smith and stated that it was impossible to convey human tuberculosis to cattle, and that if cattle tuberculosis was ever transmitted to mankind, it was so rare an occurrence that he did not consider it necessary to take measures against it. This statement, as a matter of course, aroused a storm of protest. A number of bacteriologists had before this time done work which proved that Koch's conclusions were not correct. Especially at the Laboratory of the State Live Stock Sanitary Board of Pennsylvania a large amount of work had been done, the results of which were presented in London at the same congress at which Koch announced his conclusions.

Koch's authority, of course, carried great weight, and the matter was one of such enormous economic and practical importance that scientific men in all parts of the world undertook an investigation of the facts. Most notable was the

appointment in England of a Royal Commission, and in Germany of an Imperial Commission, to study the question. In Germany Professor Koch himself was one of the members of this commission. The last report of this German commission shows that of eighty-four children examined by it, twenty-one, or exactly twenty-five per cent., died of cattle tuberculosis. In fifty-four cases of tuberculosis in grown people the human germ was found in every instance. The British commission examined sixty cases of human tuberculosis in fourteen of which, or twenty-three and three tenths per cent., they found the bovine germ. In several of their cases they found a germ which was intermediate in virulence between the two. Other observers have found also that from cattle we sometimes obtain a germ which is very feeble in its disease-producing power and, on the contrary, that in human beings we not infrequently obtain germs which have very great disease-producing power. It seems, therefore, quite certain that if we grade tubercle germs by their disease-producing power, we have a long series ranging from the most virulent which are found in cattle down to the most feebly virulent found in man.

Especially notable is the work of Fibiger and Jensen in Copenhagen, who found the bovine germ to have been the cause of death in seven out of twelve cases of human tuberculosis examined by them. Numerous private workers have had similar results. Moss of the Johns Hopkins University last year summed these up, showing that of three hundred and six cases examined by isolation of the germ and inoculation of animals, sixty-three or more than twenty per cent., were due to the cattle germ. Since that time the works of Dr. Wm. H. Park, Director of the Research Laboratories of the New York Board of Health have been published and prove that upward of three hundred children die in the city of New York each year from tuberculosis derived from cattle. It should be emphasized that the great majority of cases which show the cattle germ are in children, only a few cases of tuberculosis due to the bovine germ having been found in grown people.

It must be borne in mind that Koch has never declared that the germs in

human tuberculosis and cattle tuberculosis are different species, but only that they are different types of the same species. This point is illustrated in breeds of cows. For example, the Jersey cow and the Holstein are extremely different animals, yet both of them belong to the same species. Innumerable examples of the same thing can be pointed out in both higher and lower animal life, and also in plant life. There is no one who does not recognize that all types of the tubercle bacillus have had a common origin, the differences observed in them being due largely to the soil in which they have grown and to which they have become adapted or, in other words, the species of animals in which they have produced the disease known as tuberculosis.

Experimental evidence shows that milk is the medium by which the disease is most often transmitted. The germ may reach the milk directly in the udder of the cow. Cows suffering

with tuberculosis of the udder give milk which is swarming with tubercle germs, and such milk is, of course, especially dangerous. The early stages of tuberculosis of the udder may not be recognized by a veterinarian nor by the milker. Numerous experiments have shown that the milk of cows suffering with general tuberculosis, but in whom no disease of the udder can be detected, also may contain the bovine germ in a considerable proportion of cases, averaging

from fifteen to twenty per cent. Some experiments run much higher than this and very few any lower. My own work on five cows which had reacted to tuberculin, apparently in the best of condition and free from udder disease, showed the bovine germ in sixteen per cent. of the experiments tried.

The tubercle bacillus frequently gains entrance to the milk after leaving the body of the cow through stable dirt. The work of Schroeder in the Bureau of Animal Industry has demonstrated the fact that cows suffering from tuberculosis discharge tubercle bacilli from their bowels. While a cow coughs and in coughing throws out a certain number of germs, the majority of what she raises from the lung is swallowed and passes through the intestine, being finally discharged with the manure. The frequency with which milk is contaminated with

stable manure through filthy cows and through the dust of stables which are not well kept is well known.

Tubercle bacilli are quite frequently found in market milk. From a number of investigations which have been made within the last few years it is fair to say that one sample of milk out of every twelve contains living and virulent tubercle bacilli. In New York, Hess found that of one hundred and seven samples of milk obtained in open market seventeen, or sixteen per cent. contained living tubercle bacilli. Another investigation showed that of one hundred and twenty-eight dairies, thirteen, or ten per cent., were furnishing milk containing the tubercle bacillus. It is not astonishing then to find such figures as quoted above from Doctor Park—namely, that upward of three hundred children die yearly in New York of tuberculosis due to the bovine germ.

The use of meat is not so dangerous. Tuberculosis is a disease which affects internal organs, rather than the muscular tissue, which is the part of the animal most eaten. The chief danger seems to come from carelessness on the part of the butcher, who may use a knife for cutting through tuberculous organs or tissues and then employ the same knife for cutting off a steak or a roast, thus contaminating the surface. However, in America a comparatively small quantity of meat is eaten raw. Even where steaks or roasts are eaten rare the danger is slight, because the surface of such a piece of meat is cooked sufficiently to destroy the life of the germ, even if it should have become soiled in the way described above.

The evidence given above proves conclusively that bovine tuberculosis can be transmitted from cattle to man, and actually causes a considerable number of deaths in the human race. The fact that these deaths, so far, have occurred in children makes it all the more pitiable and important. Just what portion of the one hundred and fifty thousand people who die in the United States each year from tuberculosis contract the disease directly or indirectly from cattle no one is in a position to know accurately, nor does it seem to be a matter of great importance. If only one person in every ten thousand contracts the disease from cattle, it is sufficient cause to demand that every precaution be taken by the public. Those who persist in wishing to sell the meat, and especially the milk of tuberculous animals to be consumed by unsuspecting children, are trifling with human life. It is the duty of health officers to protect communities against the sale of such products, and it is not only the duty, but also a plain matter of self-protection on the part of consumer to see that he gets meat and milk only from healthy animals.



Bacilli of Human Tuberculosis Photographed Under Microscope—Enlarged One Thousand Times

A Contract With Himself

By Fred Grundy

ON MY desk lie several letters from FARM AND FIRESIDE readers which I will answer just as soon as I can get to them. One is from the wife of a farmer in Indiana and it has such a joyful note in it that it shall have attention at once.

She wrote me a doleful letter three years ago telling about the bad luck her husband had met with in his farming operations, and stating that he was so discouraged that he had determined to quit farming and try town life. He believed he could do much better there, teaming or helping on contracts.

I wrote him, strongly urging him to stick to his little farm and make up his mind to win success anyway. It was just ahead a little, and if he would firmly make up his mind to get to it he surely would. He decided to stick and make a determined effort to shake off his streak of bad luck and move upward.

He then began to study his vocation as he never had and to take advantage of every little opportunity to carry out his plans instead of waiting for good ones. He began to see that he had been letting his farm run down, and he began to carry out plans of improvement, not by buying a lot of stuff on credit, but by an intelligent use of what was already on the farm and could be made on it. The more

he studied, planned and worked, the more interesting farming became, and he informed his wife that he had become a contractor—he had laid a lot of plans for the betterment of the farm and home and had taken the contract to carry them out.

His wife writes me that the farm is a different place and he is a different man. He has, so she says, become a sort of a civil engineer and he has planned improvements which he is quietly carrying out and which will make the farm one of the most desirable in that section. In the meantime he is making good crops which bring good money, and they are becoming quite prosperous.

All the man needed was waking up. When his eyes were fairly opened, he saw his opportunities and he happened to be wise enough promptly to take advantage of them. As he goes on his vision will become clearer, his vocation will become more and more attractive, until the town will actually become distasteful to him. His whole mind is on improvement and he has his hands full and he is taking the keenest interest in his work.

There are hundreds of farmers who have allowed themselves to become mere laborers. They do things because they have to be done, and they have only one way of doing them, and that is by main strength. They make no effort to find

easier and better ways, and improvement is at a standstill. These are the fellows who drift to the towns, and there is no way of stopping them except by waking them up and getting them interested in better farming—better ways of doing the work. The farmer who rises at four in the morning and works until nine or ten at night is a common laborer—a sort of farm serf. The necessity for that sort of drudgery is past. A farmer can do three times the amount of work that his father ever could—that is, he can accomplish three times as much, and do it twice as well. Slavery on the farm is no longer required. The work can be so planned that none need work more than ten hours a day. The man who forces himself to labor more than ten hours is simply a poor manager. I have known but very few farmers who made it a practice to work fourteen to sixteen hours a day who ever became fairly wealthy. They died too early.

The farmer who can sit down at the end of a season and point out where he missed it is not much of a prophet. It is the farmer who can sit down at the beginning of a season and point out where he will hit it who is a prophet worth listening to. He is the hunter after wealth who always has more than one string to his bow. He always has plans

in reserve. If one miscarries, he has another ready. And that's how he knows where he will hit it.

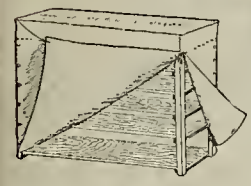
Every farm is different from every other farm. Some have great natural advantages, others have very few. If the man who owns a farm with the few gets to magnifying them, farming is going to become distasteful to him and he will soon be looking toward town.

The Indiana farmer has discovered that farming is interesting when intelligently conducted and naturally he is making it profitable. Not long ago a farmer said that he considered farming the most interesting vocation one could engage in. The closer he studied it, the more interested he became. If one works with the sole idea of getting his tasks done, farming is a bore. But if he keeps improvement and increased profit in view, he never will have a dull moment. He will be studying out ways to make the work easier, better and more effective. He will be increasing the yield by planting the best seed of the best varieties—making a thorough and clean job of every operation—keeping up the fertility and friability of the soil. These and a thousand other things make good farming the most interesting vocation on earth, and the more interested one is, the more profitable will his farming be.

Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks

An Iceless Ice-Box



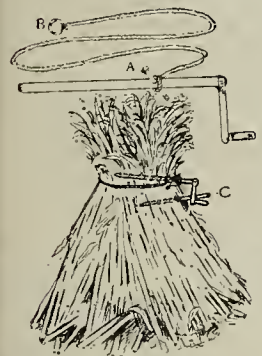
HERE is a device I have found ideal for keeping butter and eggs fresh in summer.

Support an oblong pan, zinc or tin, five or six inches long, on four legs, about five feet long. Under the pan place as many shelves as you desire, on crosspieces nailed to the four legs. Then the shelves can be taken out and cleaned without difficulty. Use heavy duck to make a curtain to go all the way around your shelves and hang to the floor, making it large enough so the upper part can be pushed down into the zinc trough. To make the curtain stay in place, run a draw-string in it at the bottom of the trough and nail to the legs.

Set it in a cool place where it can get the breeze and fill the trough with clear, fresh water. The curtain will absorb all the water and the breeze will blow against this and, therefore, keep the contents of the shelves nice and fresh. Tacks can be driven in the legs at frequent intervals and little holes punched in the sides of the curtain to go over the tacks and keep the curtain from blowing and flopping.

MRS. R. A. CALLENS.

It Makes Solid Shocks



TAKE the handle of an old hay-fork, sharpen one end and put a crank on the other. About fifteen inches from the crank bore a hole and drive in a strong six-inch bolt. Tie one end of a rope, long enough to pass around the shock, around the handle over the bolt, and on the other end of rope tie a strong ring. When the shock is ready to

tie, push this reel into the shock and throw the rope around the shock, catching the ring end as it comes around. Put ring over one end of bolt and turn crank. The shock can be quickly drawn tight as desired. Push a sharp piece of broom-stick about two feet long into the shock to keep the crank from unreeling while you tie the twine around. Release the reel by pulling out the broom-stick. Shocks thus tied will be left solid and substantial—a condition pretty hard to get with big shocks, by simply pulling on the twine.

J. H. BRATLEY.



The Wheelless Garden Plow

HERE is what I call a wheelless garden plow. It is simply a hoe-handle with a piece of iron or steel nailed onto the end, the iron to be three fourths of an inch wide, one eighth of an inch thick and eighteen inches long, and bent near the end as shown.

In using it you walk backward drawing the hoe to you. In good garden soil you can plow six inches deep with it. In vegetables planted fourteen inches apart one can break three rows the length of the handle up to where he stands, then step back the length of the handle and "plow" the rows up to himself again, covering a lot of garden in a short time. One plows up his own tracks, leaving no hard places. You can plow deep by pressing down on the handle—if the iron has the right bend and is sharp, it clings to the ground. Lay the tool on its side and it will answer for a rake to level ground. Or you can use it like your fingers to pull out weeds from between plants. Tilt it a little and you can plow close without covering the plant badly. It can take seven rows at a time, which makes fast work.

C. GRAHAM.

Stay-Put Door-Button



THIS button can be used to fasten the doors of hen-houses, gates, closets in the house, etc. Make it out of inch board the shape shown and of suitable size for the given door or gate. Put it on a round-head screw or a flat-head screw with a washer under head.

Before attaching to the door-jamb, a hole is bored edgewise through the wider part of button at the angle shown, to receive an iron bolt or heavy screw which ballasts the button so that it always comes into place and stays there.

S. B. JENKINS.

Hoodwinking Hogs

THE loading of hogs is a job about as trying on the temper as any on the farm. But just slip a large pail or half-bushel measure over the hog's head and he can be easily backed up a chute and into a wagon. Try it and you will be surprised how well it works.

J. H. BRATLEY.

Do You Like This Page? Help Make It Better

WE ARE pleased with the success of the Headwork Shop—pleased, because our subscribers are pleased. Many of them have taken the trouble to write simply to tell us their approval of the feature. And about one vote-postal in every two has a line or so extra on it, expressing some variation of the theme: "I like the Headwork Shop."

We are pleased with the way our readers are helping the Headwork Shop with their contributions. Reader, why not try *your* hand at making this page? If you have a knack or plan of your own that enables you to do something around the farm better or easier than it is done commonly, why not describe it to us—sending a rough sketch if that would make it clearer. We pay five dollars each for the three best Headwork ideas in each issue, and for all others used, our regular rates.

We are pleased with the success of our plan of awarding the prizes by a post-card referendum of our readers—a plan never before successfully handled by a farm paper of FARM AND FIRESIDE'S great circulation. We should like every subscriber's vote, if that were possible—yours, anyhow. Won't you write the titles of the three articles you like best on this page, on a postal, and send it addressed to the Headwork Shop, FARM AND FIRESIDE, Springfield, Ohio. Any one in the subscriber's family can cast the vote, provided the name of the one that takes the prize is given.

EDITOR.

How to Get Rid of Rats



THE best way to stop rat-holes is to have a funnel made with a very long tube, about three or four feet. Put the lower end of the funnel in a rat-hole and close the aperture around it very tightly by stuffing rags into the cracks. Now pour moderately thick whitewash or thin cement mortar into the funnel. The force given by the length of the tube will drive the lime into all the ramifications of the hole and close it securely.

If the rats are at home, it will kill them and prevent any odor escaping, as the lime hermetically seals up all openings. This is worthy of a trial by all whose premises are infested by the troublesome rodents.

V. C. DIEFFENBACH.

Various Jobs Go Smoother

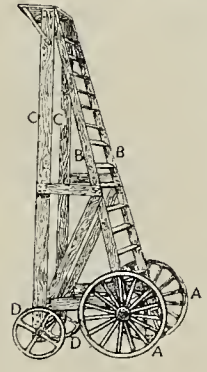
TAKE the hind axle and wheels of an old wagon and bolt or nail a piece of timber or heavy plank a little longer than a regular wagon tongue in the place where the reach used to come through. Fix front end of timber so it will take neck-yoke.

This pair of wheels will come handy in more ways than one. When hoisting hay, tie hoisting-rope to center of axle. As soon as the load of hay comes in take team from it by pulling out the doubletree pin. Hitch them directly on to the pair of wheels and up goes the hay-fork. This does away with the trouble of carrying the doubletree back and making the tugs longer or having the doubletree hitting the horse's heels. The device also saves jarring the team when the fork reaches the rail. A seat can be made behind the axle for the driver if desired.

This pair of wheels can also be used for hitching to a stone-boat or any other low drag where the doubletree is liable to bang around the horses' heels. Any low pair of wheels will answer.

R. KRENZEN.

A Ladder on Wheels



HERE is the best ladder I ever used for picking fruit. The hind wheels (AA) are old wagon-wheels. The ladder (BB) is ten feet high, made of pine two-by-fours. The upright braces (CC) are maple boards six inches wide. The small wheels (DD) are fifteen-inch iron drag wheels. The platform at the top holds the basket. The ladder is two feet wide at the bottom and one and one half feet at the top.

RICHARD GALLAGHER.



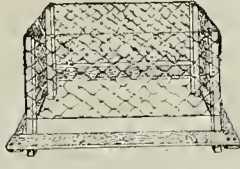
A Combination Farm Tool

THE drawing shows one of the simplest and most useful tools I have on the place. In repairing fences, plank or wire, the pointed end (B) is used in pulling staples and prying off planks. This point is also used as a pinch bar in repairing old buildings that need straightening up. The claw end (A) is used in drawing nails of all sizes. The cant-hook (C) is useful in twisting posts into place, or drawing plank into position when siding up buildings or laying floors. Dozens of other places where the tool is useful will present themselves.

This tool is made of a bar of round, hexagonal or octagonal steel seven eighths of an inch thick and about three and one half feet long. The cant-hook may be made of a piece of steel wagon-tire, one fourth by one and one half inches, about two feet in length, and bent in the desired shape. The bands that hold it on the bar are provided with a thumb-screw, so that the hook may be placed at any desired position on the bar or taken off at will.

J. WESLEY GRIFFIN.

Little-Chick Feed-Pen



WHEN you feed hens and chicks all together, the hens are likely to pick and run over the little ones, besides getting most of the feed.

For feeding little chicks I have an enclosure fenced in by wire netting fastened eight inches from the ground to posts. Four inches from the ground I made a platform, with twelve-inch boards, all around the enclosure, dividing the eight-inch space in the middle. I call my chicks to this place and throw the feed inside. When the chicks run in, the platform saves the smaller ones from being tramped on. They run under while most of the bigger chicks hop on the board and slip in between it and the netting. The enclosure can be covered over with netting so the big ones can not fly in.

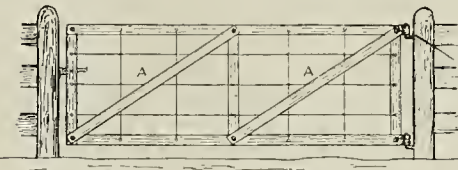
LORETE E. STRAUSS.

Saving Orphans

DO NOT abandon any chances of saving pigs if the sow should die or if there are too many for her to nourish. Pigs are comparatively easy to raise by hand. Dip a white cloth into a cupful of warm cow's milk, slightly sweetened, and place the other end of cloth in the pig's mouth. He will pretty generally begin to drink milk without the cloth from the same vessel after twenty-four hours. Use rich milk.

I have cut pigs out of the dead mother, in New Zealand, and saved them—wild pigs at that.

JOSEPH CHATTAWAY.

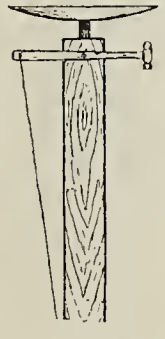


A Gate From Wagon-Tires

HAVE the blacksmith cut some old wagon-tires into two long lengths and three short lengths and bolt them together. Two buggy tires (AA) are bolted in as braces. Use wire to "fill in," drilling holes for it in the frame, and binding the wires where they cross—or use woven-wire fence. This makes a strong and light gate at very little cost.

WILSON E. MCREA.

An Effective Farm Gong



GET a disk from an old disk plow and drive a bolt through it into the top of a post as shown in the sketch. Then bore a small hole through the handle of a hammer and fasten it with a twenty-penny nail to the post about six inches from the top. A twelve-foot post set eighteen inches into the ground is about right. This gives you a first-class farm gong.

HOWARD LANE.

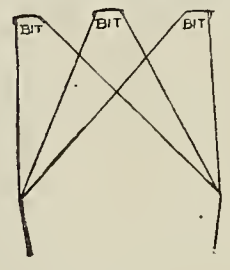
Wheel Your Straw

WHEN the straw-stack is a considerable distance from the barn, it is handier to carry the straw in larger amounts than by forkfuls. We use a wooden tray wheelbarrow and are able to pile it high by using this device. Just behind the wheel on the front of the tray attach an iron ring or staple and fasten about seven feet of rope to it. On the rear side of the tray midway between the handles fasten a large hook, open side down—a whiffletree hook or large harness snap with spring removed will do. Tie a series of knots in the free end of the rope. Load all the straw on that you can, put the rope over it, draw taut and hook one of the knots into the hook.

The rope can be fastened to the ring in front with a snap so as to get it out of the way when necessary.

P. C. GROSE.

New Three-Horse Combination



HERE is another way to drive three horses abreast, with all the checks fastened to the lines and none tied to the harness.

Put snaps on the hitch reins and snap them in the buckle on the lines; the checks go over the middle horse's neck.

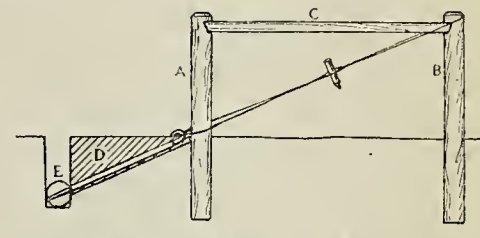
S. O. MORRISON.

Made the Crib Snow-Proof

I NEVER liked to dig corn out of the snow all winter, so I remodeled the old open-work crib as follows: It was built the usual shape, on cedar blocks, sills two by six, with two-by-four studding, leaning out. It was sheathed on outside with one-by-six-inch pine boards with one-inch cracks between. I took them off, except three boards for girths, and sheathed with one-by-twelve-inch hemlock boards, running them up and down with no spaces between. Then I used the one-by-six pine lumber to sheath the crib inside, leaving one-inch air spaces between. I use six-inch boards for floor with one-inch air spaces.

This plan gave plenty of air circulation, and the crib is rain, snow and blue-jay proof.

RALPH BARTHOLOMEW.



Hold-Fast Anchor

HERE is a fence brace that will stand any kind of a pull. Set the brace-post (B) eight feet from the end post (A) and run a four-inch brace (C) between them about forty-four inches from the surface. Dig a trench about three feet deep and long, four feet beyond the end post, crossways of the fence. Dig a narrow slanting trench (D), its shape indicated by shading, to top of ground near end post.

Have one end of an old buggy-axle bent to a hook. Put the other spindle through a log (E) of locust or other lasting wood and fasten with the nut. Put the brace wire over the hooked end, the strands running both sides of the end post. The axle should lie in line with the wire when tightened. Tamp the dirt well over the anchor log.

HENRY STEVENSON.

What the South Offers

[CONTINUED FROM PAGE 3]

In every Southern state there are large tracts of land, bought up long ago by individuals or companies for the timber. Many of these have passed into the hands of colonization companies that are exploiting them as "cut-over" lands. There are great possibilities in these lands, but the admonition that it is impossible to repeat too often, "Go and see before you invest," applies here. One is apt to infer from the term "cut-over land" that the heavy work of clearing has been done, but such land is often more difficult to bring under cultivation than virgin forest.

The sawmill man, the tie man and the man looking for second-growth stock have gleaned the timber so closely that nothing but poles and brush are left, but they did not remove the stumps that are now grown up with sprouts that are hard to kill. Tops, with that portion of the trunk unfit for lumber, were left where they fell and a dense undergrowth that has no value either for fencing or fuel has covered the ground.

It costs three dollars an acre to clear that class of land for the plow, and if, in addition, the land is grubbed clean, it will cost twenty dollars more, an expense that, beyond the house garden, will not be justified by the increased yield and convenience in cultivation. Stump-pullers, dynamite or soaking the stumps with coal-oil are too costly.

Letters of inquiry from prospective immigrants invariably begin with the question: "What Southern state is the best to go to?" and there is but one answer, they all offer good chances to the man who wants a home and none of them holds out a hope for a living without work. There are good years and bad years for the farmer in the South as elsewhere, but in no Southern state has there ever been the complete starvation failures that marked the early days of Kansas and Nebraska. Among the immigrants to the South within the last few years there are very few that have not been benefited by the change; those who have failed brought with them the habits that would insure failure anywhere.

Ill feeling between the North and South that culminated in the great war of the sixties has passed away; the welcome-to-everybody spirit is everywhere, the anti-Northern spirit is nowhere. It is indeed a new South, but there remains the old-time courtesy that insures the immigrant a hearty Southern welcome.

DUPONT

Established 1802

DYNAMITE IN THE ORCHARD

When dynamite is used to excavate the holes in which fruit trees are planted it loosens up the lower soils and destroys all harmful grubs and beetles in the surface soil. We know of an orchard planted twenty years ago where the holes for some of the trees were dug by hand and those for the rest of the trees were blasted out with dynamite.

The trees which were planted in the blasted holes have borne more fruit and better fruit than the others.

Use Red Cross Dynamite for Tree-Planting

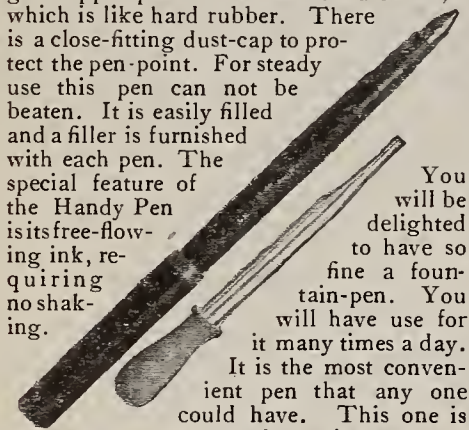
Write for Particulars

E. I. du Pont de Nemours Powder Co.
Wilmington, Del., U. S. A.

Fountain-Pen Without Cost

Every one needs this Fountain-Pen. Farm and Fireside has obtained for its readers a wonderful Fountain Pen. You can get one without cost.

THE Handy Fountain-Pen is the best pen made for usefulness and wearing qualities. It has a fine, well-made gold-tipped pen. It is made of vulcanite, which is like hard rubber. There is a close-fitting dust-cap to protect the pen-point. For steady use this pen can not be beaten. It is easily filled and a filler is furnished with each pen. The special feature of the Handy Pen is its free-flowing ink, requiring no shaking.



You will be delighted to have so fine a fountain-pen. You will have use for it many times a day. It is the most convenient pen that any one could have. This one is guaranteed to write well.

Our Offer We will send you this wonderful fountain-pen by return mail if you will send us only four eight-month subscriptions to Farm and Fireside at 25 cents each. Tell your friends that this is a special bargain offer. You can easily get them in a few minutes. Send the subscriptions to

FARM & FIRESIDE, SPRINGFIELD, OHIO

The Third Adventure of Sir Hubert

By N. H. Frame

APPLE-PICKING time was fast approaching. In the orchards along Apple-Pie Ridge "camps" were being made ready for housing and feeding the pickers, who would shortly come out from the towns, over from the backwoods and up from the southern peach-orchards.

Already many of the buyers or their inspectors were registered at the inn of the town, ready to supervise the picking of the various crops contracted for by them. The local people with argumentative dispositions (including Sir Hubert and many others) found no want of apple men with whom to discuss, pro and con, whether the daily increase in size and color was being offset by the crop; whether a severe hail or wind storm were a possibility; whether the keeping qualities would be improved or injured by further ripening; whether the buyers or the growers had come out best in the recent bargaining for prices and the many other debatable problems of orcharding at this season of the year.

The sisters of Sir Hubert were busy. Having used printed matter and postage-stamps with success in finding a customer for their apples, they were now scheming how to help create a demand for their next year's crop. From the printers they

Furthermore, they read carefully the premium lists of the county and state horticultural societies, and made preparations to preserve selected apples so as to win some of the premiums and so build up a reputation for the quality of their fruit.

Amid such prosaic scenes of commercial activity Sir Hubert had begun to be ill at ease. In his subconscious mind he already felt that, somewhere and somehow, the good name of his Honored Trees was being placed in danger. In fact, he was almost at the point of setting out on a random search for the, as yet unknown, perpetrator of the wrongs, when, luckily or unluckily, rumor reached him that a certain apple-buyer, who had purchased the crop of Mr. Careless Farmer, was falsely labeling the barrels and intended to market them as the assumed variety.

At once Sir Hubert mounted his horse and sought the orchard where this dishonest adventurer was reported at work. Quite unexpectedly this journey led him into the rather unpleasant experience at

The Dance of the Jack-o'-Lanterns

It was late in the afternoon when Sir Hubert arrived at the orchard of Mr. Careless Farmer. In passing the storage



"The holder of the lantern went down under the charge"

had obtained some announcements printed in two colors, on good paper, giving the name of the variety of apples, some few sentences telling the history of that variety and its good points, together with their own name and address. From the Experiment Station, College Park, Maryland, they had obtained Bulletin No. 144 and studied the theory of packing in bushel boxes. With the consent of the purchaser of the crop, they had arranged to pack a few such boxes for retail purposes. A merchant in town had offered to put a box on display in his window with a placard announcing that he would accept orders for a limited number of similar boxes either from home people or from travelers, who could have the boxes expressed to their own homes. The buyer of their apples also consented to allow one of their printed announcements to be placed in each barrel of apples as packed.

cellar, the door of which was open, he noticed a considerable number of barrels branded with the name of a variety which he knew did not grow in that orchard. Thoroughly angered at this positive evidence as to the cheating being done, he started his horse on a trot to locate the crew picking and packing the apples. This crew was made up of the Dishonest Buyer himself and a few strangers whom he had evidently brought with him.

When the whereabouts of these men was discovered by Sir Hubert, the latter wisely conquered his rashness and led the buyer into talk, until he might see how they were packing the apples.

As soon as he was satisfied that underneath a double row of facers of good quality they were putting wormy and fungus-marked fruit, as well as little apples, he did not hesitate to speak his mind about it. He denounced such methods with all the vehemence of a loquacious knight, thoroughly aroused, who deemed it beneath his dignity to do physical battle with a dishonest knave.

The dishonest buyer treated it all as a huge joke and not only boasted that they had wrongfully packed and deceitfully branded the barrels, but claimed if he knew where he could get them, he would put pumpkins in the middle of every barrel to add emphasis to his contempt for the rights of the consuming public. At this infamous suggestion Sir Hubert became speechless; except to declare that he would see whether Mr. Careless Farmer could not put a stop to such proceedings.

The suggestion of the pumpkin had, however, started an unfortunate line of thought in the mind of one of the rogues, who was evidently familiar with the Twilight Ride of Icabod Crane, as related by Washington Irving. The others hastily finished up the day's packing and proceeded to put the scheme into execution.

Mr. Careless Farmer himself lived some distance further from town than the location of his orchard. By the time Sir Hubert had ridden to the house, waited an hour in vain for Mr. Careless Farmer and ridden back to a point near the orchard, dusk was settling. When suddenly, therefore, from behind a tree beside the road a dusky figure bearing a lighted Jack-o'-lantern danced forth, the horse stopped so suddenly as almost to throw the rider over his head. Before Sir Hubert could do other than grasp the horse around the

neck with both arms, the horse turned and bolted—only to be as suddenly stopped by another dancing lantern directly in the road. In fact, the now thoroughly confused animal was surrounded with dancing lanterns, and shortly one lantern came circling through the air and struck him full in the ribs. At this the animal jumped straight ahead, unmindful of a lantern close in front of him. The holder of the lantern went down under the charge and the horse, with Sir Hubert still in his awkward position on the horse's neck, galloped into the darkness down the road.

The details of this Dance of the Jack-o'-Lanterns were not made public by Sir Hubert. But next day when Mr. Buyer came to the doctor's office to have his sprained wrist treated, he unwisely related the cause of his mishap.

The doctor told the tale to some of the townspeople and before night several fruit-growers not only knew of Sir Hubert's discomfiture (over which they must needs have a laugh), but they also began to reason that Sir Hubert had been in the right in his protest to the buyer. The more they talked, the more clearly it became apparent that the good reputation of the local fruit industry demanded decisive action. Anger gave speed to their feet; and in a few hours Mr. Buyer was waited upon by a most emphatic vigilance committee, bearing with them Mr. Careless Farmer, who demanded that Mr. Buyer repack and relabel all those apples, under the supervision of a local man of solid character or be tarred and feathered and run out of town on a rail. To Mr. Buyer there was no alternative, and the fruit was repacked and correctly branded before being shipped.

Sir Hubert meantime had taken the morning train to the county seat to ascertain if the law could not be invoked to save the county's honor. Upon his return he was a bit crestfallen to find that while he, who boasted of the principles of knighthood, had so weakened as to appeal to the law for help, his unknighted neighbors had, in this case, righted his wrong by force of arms—or numbers. Such chagrin was, however, offset by the satisfaction of knowing that, for the present at least, the honor of the Trees was safe.

Fall Planting of Cherries

MY OPINION is that an acre of cherries of the right varieties, properly managed, will be as profitable as the same ground planted to apples or peaches.

The first thing to consider is a suitable location. The best soil is a light loam that will retain moisture well during the summer. It is useless to plant on low or wet land unless well drained, and, in fact, it is not desirable to locate an orchard on low land even then, as there is more danger from frost than on high ground.

The ground may be prepared for cherries by cultivating deep and plowing under a crop of cow-peas or some other leguminous plant a year or two in advance. I would set the trees about eighteen feet apart each way and cultivate them thoroughly for at least four or five years. It will pay to cultivate after the trees begin to bear, although it has been the practice of most cherry-growers in this central New York region to seed to grass after three or four years. Cherries are benefited as much by cultivation as apples or any other fruit.

Perhaps one reason farmers do not think more of cherries is that they are usually planted along fence-rows and in other undesirable locations, where they are allowed to take care of themselves. Under such conditions the trees make a poor growth and bear only once in three or four years and are called a failure. If we would plant and care for cherry-trees as we do for apple-trees it would not be long until we would begin to realize their importance for family use and for market.

I prefer fall planting for cherries. They seem to make a better growth the first year when planted in the fall.

One should not plant too many varieties of cherries. Of the sour "pie" cherries one might first mention the Early Richmond for an early. One might also plant the English Morello and Dyehouse. The Montmorency also does fairly well here and is almost as popular as the Early Richmond, particularly for canning.

SYLVANUS VAN AKEN.

* * *

Inquire as to the price of vinegar; consider how cheaply you can produce it out of cull and fallen apples; then get busy with the cider-mill.

I Want to Prove to You that it Pays to Grow Fruit

You Eastern farmers can make more growing fruit than from any other crop. It is a practical business you should push—in it is your great opportunity. I'll tell you why. Right soil, fertility, water, sunshine, good trees, know-how, labor and markets—these eight vital things are necessary—and these only, plus the man who knows how to use them. You have the eight essentials. From my orchard experience, I know that the land and climate in the Middle Atlantic and New England states are ninety to a hundred per cent as good for fruit as in any section of the world. About the only difference between you and the Colorado man whose 12-acre farm is worth \$25,000, is that he started and has returns, while you are going to begin now. Even your unproductive hills will raise the finest grade of fruit. You have every condition needed to make just as much money as your successful Oregon neighbor, and your land and labor are cheaper. Yes, a crop of fruit worth \$500 to \$4,000 an acre is the rule in such places as Hood River, Ore., Wenatchee, Wash., and Grand Valley, Col.; but these are not due to conditions of soil or climate. Applied knowledge makes them—people merely found out what could be done, and did it.

The secret of these phenomenal successes in getting profit from fruit is simple and short: plant gilt-edge trees and then care for them with modern methods.

In all my travels to study fruit growing, I find that up-to-date methods insure robust trees and big crops of "fancy" and "choice" fruit selling for "ex tra" prices every year. Plant all the fruit you can, whether you are confined to a city back yard or have a thousand acres.

I'll Send You Free "How to Grow Fruit"

This is a book we publish, giving the best methods and ways taught us by 20 years' experience with over 100,000 bearing trees and 2,000 acres of nursery. It goes into details, and shows that the profits mentioned here are practicable on your farm. It tells you how to raise fruit, from selecting a location to packing for market. The way you can, without charge, get Harrison's Service to help you help yourself, is also given. It sells for 25c. I will send it free, though, if you send me the coupon attached. I want to help you to learn, to your everlasting benefit, that it will pay you big to grow fruit. Hence, I'll give you this book. Write me today.

ORLANDO HARRISON, Private Desk 5, J. G. Harrison & Sons
HARRISON'S NURSERIES, BERLIN, MARYLAND
"How to Plant About the Country Home" is a most complete and valuable little book, telling you how to properly place and care for fruit trees, evergreens, etc., as ornamentals, for the greatest beauty, comfort and profit. It's also a 25c. book, but a copy will be sent you if you return above coupon within 30 days.

COUPON 5.
Good for one copy of "How to Grow Fruit," and one copy of "How to Plant About the Country Home," price 25 cents each—if mailed to Orlando Harrison, within 30 days.

Gardening--By T. Greiner

Big Onions and Big Weeds

I AM glad that the onion harvest is now close at hand. The Gibraltar bulbs are simply immense. They grew on land that had not only been well manured this spring, but also limed. The good rains, coming after we thought we could "lay the crop by," also started up lots of weeds, especially purslane, and the ground is well covered with it. I am anxious to get rid of it and of other stray weeds. So I shall be more than ordinarily prompt in pulling the onions and taking them off the field. The latter will then at once be plowed and the weed growth turned under.

Onions weighing from a pound to a pound and a half are no rarity in this patch. But I did not succeed in getting our former favorite, the Prizetaker, to that size. And, besides, they are not as uniform in shape and color as they used to be. It was seed of my own raising, too, that gave me these onions, seed grown from selected bulbs. In this case like did not produce like. When I try Prizetaker again, it will be from seed bought from the seedsman. Will it be better? Time will tell.

I have noticed, however, that we don't get any more the same onion that I got the year of its first introduction, no matter where I procure the seed. I do wish we could get that same original Prizetaker to plant again. It was a grand thing. Ailsa Craig did not do any better. It is said to be an onion of the same type. We need an onion of the original Prizetaker type for use during winter and until spring. It is a fairly good keeper. We have often carried sound selected specimens through until April in good condition.

I can not hold the Gibraltar over that long, but always try to get rid of them in early fall. They are the mildest and sweetest of all onions I know of. People can eat them raw, and like them. We do. But it is not safe to hold them long. My price is one dollar per bushel. I would take less rather than risk holding them. I don't plant more than I am reasonably sure I can sell early at that price. And within that limit it pays.

Where is the Profit?

A Pennsylvania reader asks: "What is the most profitable way of raising onions, from seed sown in spring or from sets? And which method will give the largest onions?"

Many gardeners, especially near the larger cities and towns, plant quantities of sets, the crop to be mostly sold for green or bunching onions. Few gardeners (except in more southern localities) plant sets to raise dry or fall bulbs. The growers of green onions from sets claim that the crop pays them a fair profit. At least they think so. I can not see it. I can grow a number of times the quantity of onions for bunching on the same area that they do from sets, by sowing seed in open ground in August, and I can do that much more easily and with less expense, besides getting my crop of green onions four or more weeks earlier when prices rule much higher.

Larger onions of any of our standard sorts can also be grown directly from seed sown in open ground in early spring than are usually produced from sets. The advantage, therefore, seems to be all on the side of those who use seed, provided they have the land and the skill to grow good onions. Where skill is lacking, it may be better to grow onions from sets. The largest bulbs, of course, are grown by the newer method of sowing seed of the large Spanish type of onions in January, February and March, under glass, and transplanting to open field as soon as weather and soil conditions permit.

More Lime Needed

Air and sun eat up the humus in so-called "light" or porous soils—soils of a sandy or gravelly character, with gravelly and therefore open subsoil—pretty fast. This process charges the soil water with carbonic acid, and water thus charged, in its turn, dissolves plant-foods more readily than water not so charged. Lime applications may, consequently, not be the same help on soils of that character that they are on our "heavier" soils—namely, clay loams. The latter, when manured with stable manures as freely as ours are, show greater tendency to become "acid" or sour than the lighter soils. In our anxiety to provide the humus, we have to some extent overlooked the virtues of lime. I see plainly that in order to get

all the good that there is in the big heaps of stable manure I have been carting to the fields, I must make freer use of lime.

I am so strongly impressed with this evident fact that I shall rely entirely on fair lime dressings for some fields for next season, and reserve the manure for fields that have not been so heavily manured in recent years. On the same patch which, although well supplied with humus and with actual plant-foods, has failed to produce melons and other vines for the past two years I expect to plant these crops again next year and, simply by using lime, get that really good soil in such condition that we can say "it is as mellow as an ash-heap" and that it will produce "bumper crops" of cucurbits. We shall see.

Don't Be Crowding Things

Some years ago while setting asparagus-plants I had a lot left over, and not knowing just where to set them, planted a row between rows of rhubarb, this being also a new bed. The rhubarb rows are four feet apart. My idea was to plant the asparagus deep so that the one-horse plow could be used for working the rhubarb, and run shallow right over the asparagus in spring. But the combination is not satisfactory. It gives us but little chance for continuous cultivation. Consequently the weeds are giving a good deal of trouble.

So long as we have land enough to use, it is much better to plant each crop by itself and give to each the proper space. I am now plowing up the rhubarb to give the asparagus room, and will use the plants to make a new rhubarb plantation. Then I can give to each the attention which it needs, and give it at the right time, and keep the beds free from unsightly weeds. In the long run I believe I can grow just as many good vegetables by giving to each kind enough space than by crowding them together, and I can do it with a good deal more ease and comfort.

Sun is Wanted, Not Shade

You may plant a new orchard. The trees are wide apart. For a year or two they do not shade the ground much. It is perfectly feasible to grow garden vegetables in the young orchard. Don't imagine, however, that you can keep this up until the trees have grown to considerable size. I do not know of any garden crop that will do well in even partial shade.

It might do to plant lettuce or celery or herbs or gooseberries on the north side of a fence or a wall or building. Most of our ordinary garden vegetables, however, need full sun, and the more, the better. There is absolutely no room in a vegetable-garden for even the best fruit-tree.

This year I have a row of peppers of various sorts west of my Lima-bean trellises. Peppers are thought to be less in need of sunshine than egg-plants or tomatoes. The wall of bean-vines, however, deprives the peppers of the glory of the morning sun, and they resent it. They would respond far more freely to our otherwise good treatment, were they more fully exposed to the sun. All these things want sun, not shade.

Hard to Control

A reader in Ohio sends me a cabbage-leaf badly infested with the cabbage-louse ("green fly") which last year completely covered cabbages and turnips and other vegetables of that class over a wide stretch of country, and just about ruined these crops. In the light of our present knowledge of this pest and ways of dealing with it, I can not hold out much hope to the inquirer for its control, except that Nature herself, by changing weather conditions, will put a stop to its ravages.

This year we have had plenty of rain in this western New York region, some of it very heavy. Our cabbages and turnips have thus far remained entirely free from lice. Should they make their appearance, I would spray with lime-sulphur or with strong tobacco-tea or the newer fish-oil solution or even with hot soap-suds. I have a knapsack sprayer and a nozzle arranged in such a way that I can easily spray from underneath the leaves. And in order to facilitate such spraying, I would remove some of the large outer leaves, taking them out and destroying them. Hot and dry seasons are the ones which favor the increase of these plant-lice. They do little damage in cold and wet seasons.

Trees as Robbers

Even poplars and walnut-trees have their places where they may be useful and desirable. But I don't want them in the garden. I don't want them even within four rods of the garden, nor any other large tree within several times that distance on the east side of it. If at the east, they rob the garden of sunlight early in the morning. In any situation near the garden, a poplar or walnut will rob the crops planted within four rods of it of food and moisture.

In the northwest corner of the grounds we have a number of large poplars and two walnuts, planted as specimen trees in a collection of hardy ornamental trees and shrubs. Since they attained some growth, I have time and time again attempted to grow various kinds of vegetables up to within twenty feet of these trees. Manure has been applied freely as elsewhere and the soil is a good strong loam. But I have never had any crop worth harvesting within four rods of the nearest poplar or walnut. No matter how much rain we have in the growing season, the land is dust dry. The trees seem to eat up the food faster, too, than any vegetable crop would take it. Even weeds grow hesitatingly and feebly.

I must either kill the poplars and walnuts or give up planting garden crops on that spot. I am not going to waste manure and effort and seed on a piece of ground which is forced to be so unthankful for these favors. Surely, there is no place on small home grounds for poplars and walnuts. There is hardly any room for them on these twelve or more acres.

Vegetables All Winter

Several readers have written for advice on how to keep Irish potatoes, cabbages, onions, beets, etc., all winter, for family use. To some extent this is a local question. The solution depends on climatic conditions. Irish potatoes, as also beets, should be guarded against freezing. Beets and carrots can stand a little of it, but are better off when kept from it. We store them in the cellar where it is cool and a little damp. When we store cabbages in the cellar, we usually wrap each head in a double thickness of newspaper, folding and tying it around the stem, and hang it up, head down, on the side of the wall or from the beams overhead.

Cabbages can stand some freezing, but not too much of it, nor much freezing and thawing. Onions, to keep well, must be put in a cool, dry, airy place. They may be allowed to freeze, but should not be allowed to freeze and thaw repeatedly. When frozen, keep them frozen until wanted or until they thaw gradually in spring. Irish potatoes keep best in a temperature just a little above freezing and in a dark place unless wanted for planting, when they may be exposed to the light. Most root crops, like carrots, turnips, winter radishes, beets, etc., keep best if kept covered with sand, soil, sods or even straw or other material—anything to prevent evaporation and therefore wilting. Their goodness depends on their succulence and crispness. These are only the general principles. You must handle the details according to your own local conditions.

Trim Dormant Trees

A Michigan reader asks the best time for cutting peach-trees back. That is to be done in the dormant season, of course. When setting out the young tree, cut it back severely. Let the top form low, letting three branches grow and keeping the others rubbed off. Then little trimming will be needed the next season, except perhaps to cut the ends of the limbs, removing, say, one third of the new growth. Thus keep the growth shortened in. You can trim a peach-tree at any time between fall and early spring.

Notes

Mr. Alex White writes from Haverhill, Massachusetts: "A sure way to rid land of burdocks is to cut them off close to the ground and pour a little kerosene onto the root. It will never sprout again. This will kill many other weeds."

The largest hothouse in the world is being erected at North Wales, Pennsylvania, and will be devoted exclusively to the growth of American roses. Its temperature during the winter will be kept at about sixty degrees. Its construction will require not less than one hundred and twenty-two tons of glass. It will be heated by steam.

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They Sent for Their Son

Maidstone, Sask., Canada, August 5, 1910.
My parents came here from Cedar Falls, Iowa, four years ago and were so well pleased with this country they sent to Coeur d'Alene for me. I have taken up a homestead near them, and am perfectly satisfied to stop here.
LEONARD DOUGLAS.

Wants Settlers' Rate for His Stock

Stettler, Alberta, July 31, 1910.
Well, I got up here from Forest City, Iowa, last spring in good shape with the stock and everything. Now, I have got two boys back in Iowa yet, and I am going back there now soon to get them and another car up here this fall. What I would like to know is, if there is any chance to get a cheap rate back again, and when we return to Canada I will call at your office for our certificate.
Yours truly, H. A. WILK.

Will Make His Home in Canada

Brainerd, Minn., August 1, 1910.
I am going to Canada a week from today and intend to make my home there. My husband has been there six weeks and is well pleased with the country, so he wants me to come as soon as possible. He filed on a claim near Landis, Sask., and by his description of it it must be a pretty place. My brother-in-law, Mr. Frank J. Zimmer, lives there and it was through him that we decided to locate in Canada. Yours truly,
MRS. RICHARD HENRY EBINGER.

Send for literature and ask the local Canadian Government Agents for Excursion Rates, best districts in which to locate, and when to go.

H. M. Williams
415 Gardner Bldg., Toledo, Ohio.
J. C. Duncan, Room 80, Syracuse Savings Bank Building, Syracuse, N. Y.

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Favors Fall Chicks

How many chicken-raisers there are who "hate to bother with them in the fall." I consider the fall-hatched chick has many advantages over the one hatched in the spring. I prefer to have them hatch about the first of September.

In the first place, eggs for setting are cheaper at that time than in the spring, whether the eggs are home-hatched or bought of some breeder. Eggs hatch better, as there is no danger of their getting chilled, even should the hen remain off the nest for hours.

Little chicks do not die from becoming chilled, which is often the underlying cause of bowel trouble among spring-hatched chicks. Furthermore, the grass is usually short in the fall, so they may be permitted to run at large without fear of getting all drabbed and wet. They need less protection from the cold than the spring ones, as September and October are usually warm and pleasant. Besides, at this time of the year, grasshoppers and bugs are plentiful, also seeds of weeds and grasses, and at threshing-time much grain is scattered around. There are also more vegetables than are needed for immediate use, which can be stored for the young poultry to consume later on. All small potatoes should be saved when dug and they are especially good for the growing chick if washed and boiled, then drained, mashed and mixed with bran and cornmeal, adding a little salt and sometimes pepper.

The chicks can be allowed more range, for by the time they are large enough to damage the garden or flower-bed the season for both is at an end. One usually has more time to attend to them, also, in fall than in spring.

The chicks will, however, need special quarters for winter, which they can occupy nights and also during cold and stormy days, and this house should be separate from that containing the grown fowls. But this same treatment is essential for spring chicks.

The fall youngsters should be fed about the same as spring chicks.

Their house should be tightly walled, but should have several windows, which may be covered with muslin, which will let in both light and air. But in extreme cold weather I believe these should be closed at night with wooden shutters, at least under our conditions here in eastern Kansas.

When it is necessary to keep them confined, they should be supplied with litter in which their dry feed should be scattered, in order to give them scratching exercise; but in ordinary weather they should be allowed to be out at least part of each day.

Although at best the pullets will not lay before February, they will then, with proper care, more than pay for the trouble of raising them. And the roosters will furnish fries all through the late winter.

Mrs. C. S. B.

Poultry in September

IF THE fowls can run at large all this month, they will be in better condition for winter. The young pullets and cockerels especially should have full range and generous feeding, as their subsequent usefulness as layers or roasters demands good development. Continue the complete rations of the previous month. They will stand more corn, but if they have access to corn-fields, this grain must be omitted from the feed. New corn should be dried in the oven before feeding.

Such cockerels as have their growth and can be brought to proper degree of plumpness should be sold.

The molting of the older fowls being about over, the large proportions of bran in the August ration may be replaced by better egg-producing foods. Substitute whole wheat for corn and feed alfalfa or clover meal instead of bran in the mash.

Should there be any stragglers whose rough plumage indicates that they have not accomplished their molt, they should be given fresh quarters and special feeding given as in August.

M. ROBERTS CONOVER.

Don't throw dead chicks in the grass or weeds, for cats are sure to find them, get the taste for them and become chicken-killers. The habit can seldom be broken, and some one's pet may suffer for your carelessness.

It is a good plan to dispose of all the old roosters now. If you want to keep one or two, put them in with hens that are not laying and keep them there. They are nuisances and disturbers among hens that have business on hand.

When your hens take to the trees, one of two things is sure: They either have not all the fresh air they need or else their house is inhabited by beings that make life miserable for them. The room of all such pests is better than their company. Better get rid of them for the sake of your hens and your own pocket-book.



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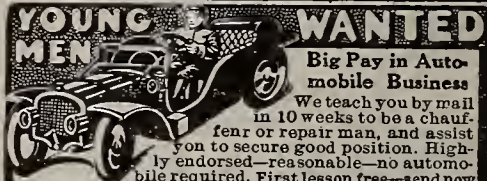
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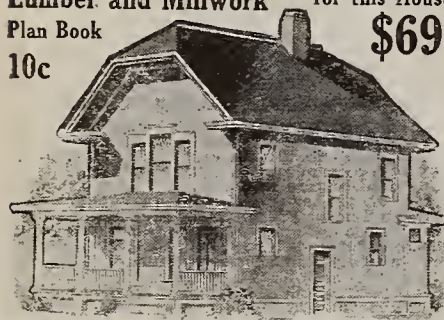
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Live Stock and Dairy

November Lambs—Their Breeding and Nurture

A RAM of mean disposition is a source of constant trouble. In buying, therefore, care must be taken to see that the proposed purchase is willing to be led by halter or neck strap and that he shows a friendly trust in his handler, a feeling induced by kind and fearless treatment. In order that he may be kept separate, yet get plenty of exercise, a corner of the pasture away from the ewes, but near the yard, should be strongly fenced in, in which a closed, well-ventilated shed should be built, to which he can have access during the day, but be securely confined at night. He may be allowed to cover six to eight ewes during the day and then returned to his own quarters.

His daily ration should consist of oats, wheat or barley with bran or linseed-meal. He can safely be allowed two pounds of this daily, as long as he cleans it up. Two thirds of this should be grain. Give it in three feeds. Roots or other succulents should be given sparingly; but he may have all the good clean meadow, red clover or timothy hay he will eat with relish. All left-over food must be removed. He must have access to fresh, pure water and rock-salt in his yard.

His shed should be well bedded and kept clean. Company will tend to keep him good-humored; a wether or two, or perhaps a sedate old ewe; but never put two rams together, for their natural pugnacity is sure to break out some time or other with often serious consequences. A healthy three or four year old ram can safely be used on one hundred ewes, and in the present case, having got through with these fifty ewes by July, he will have until October to rest. He may spend his time with the castrated wether-lambs, and his grain ration be reduced until about September, but must never be quite withdrawn.

He may be shorn, with the ewes, as soon as the weather is settled late in April or early in May. A professional shearer should be employed. It is hard to determine as to the preliminary washing. Some wool-buyers prefer to have it done, some to leave it undone. The best advice I can give about it is to consult your local buyer. If it is to be done, it should be at least ten days before shearing. The sheep should be dipped after shearing to get rid of ticks and lice. There are many good safe dips in the market, and for a limited number of sheep it is not worth while to try to make any.

It is most desirable that a register of the date at which each ewe takes the ram should be kept so that the shepherd may know pretty closely at what time she should be separated from the rest of the flock and be specially watched. All peculiarities of the ewe in her maternal capacity should also be noted down, as a guide to which should be kept for breeding and which disposed of. I have known shepherds who could recognize every ewe as we do our friends; but for the less gifted in that line the simplest marking I know of is to punch a hole through the lower part of the ewe's ear, and when the edges are healed and hardened, insert a copper or brass wire ring to which is attached a metal tag about as large as a silver quarter numbered from one upward. By smearing the under part of the ram with grease and dry paint or chalk, he will mark the ewes so it can be readily seen each day which he has served. These should be removed to a pasture or yard by themselves.

Lambing Problems

The ram should be brought to the ewes as early in June as possible. The best plan is to divide the ewes into two lots and to introduce the ram to each lot on alternate days. In case a ewe should have failed to become pregnant, they should all be introduced to him a second time in about two to three weeks from first service.

As a rule, a healthy full-mouthed ewe experiences little trouble in lambing, but there will be exceptions. Their actual labor often extends over several hours, but no anxiety need be felt until signs of exhaustion are evident; then, and not

until then, manual help should be offered. Any farmer used to tending farm animals in parturition will have a fair idea of how to give this help. Presentation is properly with the nose between the fore feet. The hands should be well oiled. Considerable force united with gentleness may have to be used. If the head and legs can not be made to pass, the lamb will probably have to be sacrificed. Rough usage will almost certainly cause the loss of both ewe and lamb. The numerous details can not be gone into here, but I will give a list hereafter of authorities to be consulted. In the common case of caked udders Mr. Frank Kleinheinz's admirable paper in FARM AND FIRESIDE of July 10th gives all the necessary treatment.

Here, however, I will repeat the advice that for a first lambing season it is most desirable to secure the services of an expert shepherd. It will pay well in the future if you are willing to learn by acting as his helper for the short season this lambing ought to last. As long as it does last the shepherd must be with his sheep night and day; he must at least look around his yard three or four times during the night, and in order to do this he should have a little hut built in a corner of the yard or a room fitted up in the barn

administered and for a minute or two afterward. The under part of the tail should be examined and dry feces which may have collected there removed.

Whenever I have been tempted to give up the separate-pen system I have always found cause to regret it. It may seem troublesome at first, but the quiet, safety and general well-being it insures is a wonderful factor in hastening the development of the lambs. Both ewes and lambs soon recognize their own little home, and if, on returning from exercise, a mistake occurs, the proper owner will quickly oust the intruder. For the first week or so exercise is not needed beyond perhaps a short run in the yard in small lots. Afterward an hour's run in the pasture is sufficient.

Fright Often Fatal

If this run is given, great care must be taken that no dog or other disturbing element can approach the sheep. So fatal are the effects of any violent fright, that unless absolute security can be insured they must take their exercise in the yard; the division of this into lots makes this quite convenient. A shotgun is the only cure for cur dogs—or a Scotch "collie" that loves his sheep and is a game fighter.

The same course of feeding recommended for the ewes before lambing may be continued. The fear of too much fat has now become a past bugbear. Neither ewe nor lamb must be stinted. The grain allowance may safely be made a pound a day, the only limit being that they must not have more than they clean up pretty closely. At first the grain allowance should be given in the separate pens. The lambs will soon begin to share with their dams. I have seen them picking on bruised oats, oil-cake and hay at a week

old. Of course, their main food must be milk, but the earlier they acquire the taste for grain and to nibble good clover or timothy hay, the faster they will grow.

A little scouring will do no harm, but it must be watched. After their first month the gate between two divisions of the yard may be fixed so that the lambs, but not the ewes, can pass through and get their grain ration by themselves. A pound a day among ten of them at first, gradually increased, but never more than they clean up. If there is any, a little rape may be cut for them and given with their dry food.

In FARM AND FIRESIDE of July 25th, Page 11, under subhead of "Culling at a Profit" will be found some directions as to ewe-lambs, which I think can be profitably followed. Care must be taken to properly dry out the ewes. Lambs for spring markets should neither be docked nor castrated.

By the middle of April these lambs should be ready for market, and such of the ewes as have not proved too valuable as mothers should go with them. To facilitate this the lambs of such ewes may have been taken from them about the middle of March, being allowed to meet them for a meal but once a day. Even this once should soon be discontinued; the ewes being dried out by only occasional hand milking; then the feed of both ewes and lambs may be raised to the top notch, this side of satiety from overdoing it. Some rape cut fresh and given in moderation will now help both. Be sure that they do not have access to any stale food and that they get fresh water.

The "top of the market" for these lambs [CONCLUDED ON PAGE 11]



Ready for the Easter Market

nearby, with a bed, a stove on which hot water should always be kept, a lantern, his crook and a shelf to hold a few necessary medicines, such as Epsom salts to be given in one-half-ounce doses or, still better, rhubarb in small doses as purgatives; laudanum as a sedative, one to two drams; tar for external use for ulcerations or wounds; tobacco in a decoction for ticks, lice or scab, and some spirit, gin, rum or brandy, for emergencies. A little of one of these given in warm milk will often save a lamb's or a ewe's life.

When a ewe has been delivered of a lamb which soon gets on his legs to reach for the teat and is successful in his efforts, all that is needed is to see that the udder and teats are clean (if not, they should be bathed with fairly hot water) and a little of the milk drawn off to make sure that the flow is natural. If, however, the lamb fails to get on its legs, it must be helped up and assisted to suck. If it is unable to do so, it must be fed from a bottle with a rubber nipple or from a teaspoon. Its mother's milk is best. If it should turn out that from some trouble with the udder or the teats or from some other cause she is unable to supply it, milk must be drawn from a ewe that has more than her own lamb needs, and be fed as above. The ewe must then be seen to, and if in a day or two she is still without a full supply of milk, a foster-mother, one which has lost her lamb or which has more than her own lamb needs, must be found and made to adopt this one. This is easily done if she is held a few times until she is used to the lamb.

Ewe's milk is always best, but, if it is absolutely necessary, that from a fresh cow, warmed a little, may be used; at the start a spoonful every half hour should be given, gradually increasing the quantity and lengthening the periods between feeding. This will do until a good foster-mother is found or until the mother-ewe begins to let down milk freely.

Young lambs are very liable to get chilled. When this occurs, a bath of water as hot as the hand will bear it should be given at once, succeeded by a thorough drying and hand rubbing. Some warm milk with a little spirits should be given and the lamb wrapped up in an old blanket and laid in front of the fire in the hut.

Constipation is also a common trouble with young lambs. The best remedy for this is injections with a syringe of warm milk or warm water gruel. To make this effective the lamb should be held up by the hind legs while the injection is being



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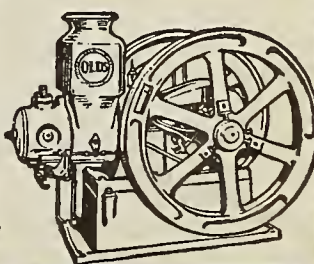


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Live Stock and Dairy

How to Control Milk Fever

AN OREGON reader has heard that it is possible to prevent milk fever by simply using care in drying off the cow, special care being taken to leave no curdled milk to dry up in the udder. He writes to ask whether this treatment alone is safe to depend on.

To a great extent it is possible to prevent milk fever by using care in drying off the cow, providing she is handled up to and through the parturition period in a most careful manner. No large amount of milk should ever be left in the udder when the cow is dried off.

Cows fed well during their rest period and thus rendered plethoric in their condition are more susceptible to milk fever than cows poorly fed and emaciated at calving. However, the advantages gained in feeding the cow well at this period are sufficiently great to offset the danger incurred by milk fever.

An excellent precaution against milk fever is to give the cow a pound of Epsom salts in a half gallon of warm water a day or two prior to freshening. If the salts are given in the form of a drench, great care should be taken not to strangle the cow. It is much safer and more advisable to use a probang (a long tube made for the purpose by veterinary houses), which will carry the medicine direct to the stomach.

But no system of prevention has yet been learned that is absolutely certain to guard off milk fever at all times and under every condition. Cows that give a large flow of very rich milk may and often do have milk fever even when every precaution has been taken. The only safe method of handling milk fever is to use the precautions above outlined and then have on hand a milk fever outfit, so that if the preventions fail, the cure may be administered at once. These outfits are now sold at very reasonable prices by all veterinary-supply houses and by many other firms carrying stockmen's supplies. They consist essentially of a thin tube for insertion in the teat and a rubber bulb to squeeze the air through the tube, with some filtering attachment to purify the air thus pumped into the udder.

There was a time when ninety-eight per cent. of the cows which were attacked with milk fever died. At the present time, by the use of the simple air treatment, at least ninety-eight per cent. of the cows having milk fever may be saved if the air is pumped into their udders in a clean manner and thoroughly before the case has reached advanced stages. So simple is this treatment and so certain it is a cure that dairymen are now enabled to feed their cows much better during their resting period before freshening, and as a result have their cows in so much better condition of flesh, stamina and strength stored up, that they are enabled to secure much better work from their cows than they were in the past when it was necessary to keep the cows in a poor condition to eliminate the danger of losing them from milk fever.

HUGH G. VAN PELT.

Soreness From Poor Shoeing

A NEW YORK subscriber describes a lameness of his mare that clearly indicates trouble with the "flexor tendons." The tendons of her front feet become stiff and sore, he says, and the tendons of the hind

legs sometimes swell near the cap.

The most frequent cause of this condition is faulty shoeing. The smith either fails to pare the toes of the feet as he should or else the owner of the horse is neglectful and allows the shoe to remain on too long and the feet grow out, thus raising the toe and spraining the back, or flexor, tendons. Just as would happen if a man were to walk in shoes with no heels on them, the muscles of the horse's leg soon become sore and lame.

Have the toes shortened as much as possible and raise the heel of the shoe a little. Then make it a practice to bathe the legs in as hot water as the horse can bear every night after a day's drive and wipe them quite dry with dry cloths. Use a little of the following oil liniment: Olive-oil, five ounces; oil of origanum, two ounces; oil of spike, one ounce, and oil of sassafras, one ounce. In a bad case bandage the leg overnight with a woollen bandage, and if the animal is not to be used in harness, it will be well to leave it on the whole time. C. D. SMEAD.

Points in Barn Bookkeeping

THERE are still comparatively few farmers who keep all registered cows with definite names and registry numbers, and to these the problem of keeping track of the nameless cows of a large herd is often a great source of vexation. The other day a dairyman told me his plan, which seems very simple and which he assures me he has used successfully for several years.

Each stall in the barn is given a number and the cow occupying that stall is given the same number. As every cow invariably is forced to occupy the same stall day after day, records of the milk weights and tests of the individuals are very easy to keep. And whenever a cow is sold, its stall remains vacant until a new cow has been procured, when that cow is given the number of the stall.

Another difficulty that comes up in keeping milk records is that the sheets, to record the number of pounds of milk each cow gives, become quite soiled under the average barn conditions. To have their permanent records clean and neat in appearance, many dairymen make the barn record for each week on rough sheets of paper and take the pains to copy into a book specially prepared for the purpose, the record for each cow month by month. WILLIAM A. FREEHOF.

Change Their Diet

"WHAT makes cows take to eating manure and chewing boards, and how can one prevent it?" asks a letter from a Michigan subscriber.

The fact that cattle eat boards and foreign materials is an indication that there are some of the essential food elements which they are not receiving in their rations. Such action on the part of cattle is common in the winter, but seldom seen in summer when they are on good pasture. Likely the drought of the present summer has made it impossible for them to secure the necessary amount of feed.

A little experimenting may be necessary before the right preventive will be hit upon. Oftentimes regular salting or keeping salt in places readily available to the cattle will overcome this abnormal appetite. Perhaps there is a lack of protein in their ration. This can be supplied by the addition of oil-meal, gluten feed, cotton-seed meal, distillers' grains, brewers' grains or any of the highly nitrogenous commercial foods. Alfalfa and clover hay are also excellent for the purpose of supplying this nutrient.

Again, there may be a lack of mineral matter that is supplied largely through the stems of grasses and the outer hulls of grains. Bran is an excellent food to supply this material in small amounts and mixed with the other grain will also be likely to satisfy the appetite of the cattle so they will not care to eat boards, etc. H. G. V. P.

If you feed fallen apples alone, and no corn, to the hogs, you may expect the acid in the fruit to put an "edge" on the animals' teeth, and when you begin to feed corn, their teeth will be so sore they will eat little, if any, and be just that much longer fattening.

November is the best month in the whole year to breed the mares. That will throw the foaling season in October next year, when there are no flies to mention, when the weather is cooler and more conducive to good health and when the mare usually has very little, if anything, to do.

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Live Stock and Dairy

Better Than Corn Alone

CHARLES B. CORBIN, of Hartford, Kansas, last winter made an interesting, practical test of straight corn feeding as compared with corn plus supplementary protein feeds for finishing hogs. He writes:

"I began the winter of 1909-10 with seventy-three head of hogs—part of them December pigs of 1908, the rest 1909 spring and fall pigs. In September I put up forty head of the December pigs that had run through the summer on grass and not much other feed from July until I began to cut up soft corn for them in the early fall. They were pretty thin. I cut up corn for them until I could jerk it. These hogs were sold in December, 1909, at one year old without having had any other finishing feed but pure corn, with fresh water always before them. They did not weigh as heavy as I thought they should—one hundred and sixty to two hundred pounds was the average.

"On the 15th of December I put up seventeen head of the spring pigs and began feeding them oil-meal, tankage and shorts—one half-gallon cupful of oil-meal, four cupfuls of shorts, three cupfuls of tankage, given twice a day in twelve gallons of water, letting the feed soak twelve hours. I gave them in addition all the corn they would clean up and kept fresh water with a lump of lime in the trough all the time—with salt, ashes and copperas convenient to lick at. The seventeen were sold, at nine months old, the first day of March, averaging two hundred and twenty-five pounds a head.

"I put up the same week sixteen October pigs and fed the same ration, only I gave them the slop three times a day for two months, then gave fresh-cut alfalfa at noon instead of the noon slop. When sold the twentieth day of June at seven and a half months old, they averaged one hundred and ninety-seven and a half pounds a head."

Self-Dipping Porkers

IT is not a pleasant task for either man or hog to resort to dipping every few months in order to relieve the swine of lice, but the habit of the hog of investigating every cranny about the pen solves this problem, and makes him voluntarily perform the cleansing office.

On a high place in the lot scoop out a hole and make a small basin of cement that will hold a barrel or two, in a shape so that the hogs may go in and out to wallow. Put a few buckets of water in it, and when the hogs have come to regard this as a wallowing-place, add more water and a little hog dip. The hogs will learn in a short time that this wallowing relieves them of the lice and will patronize this free bath.

If there are other places to wallow and the hogs are loath to try this new place, it might be made in the division fence between two lots, so that the hogs will have to pass through it in going from one lot to the other. If fed in first one lot and then the other, they will be required to race through the dip twice a day besides the voluntary trips they make, and though not submerged in the dip, nearly every part of the body will be covered every few days, making it an undesirable habitation for lice.

H. F. GRINSTEAD.

Butter Won't Gather

A WEST VIRGINIA subscriber writes about a trouble that is not uncommon with cows that are far advanced in the period of lactation. In churning the cream from his cows' milk, the butter comes very soon, but does not gather. Oftentimes, where the milk of only one cow is used, it happens that after she has been giving milk for eight or ten months it becomes very difficult to churn butter from her cream until after she again freshens, when there will be no further difficulty. This may be so in the given case.

There is a possibility, however, that the fault lies not with the cream, but with conditions at churning-time. From the description given it would appear that the temperature of the cream is too high when churned, causing the butter to come quick and its condition to be soft and difficult to gather. The temperature should be lowered gradually from three to five degrees. A dairy thermometer is an absolute essential in making butter, as it is impossible to determine in any other way when the cream is in a fit condition to churn. The temperature of the cream should be fifty-two degrees or lower in summer-time. It will take longer to churn the butter, but when it comes, it will be easier to gather and the body will be of a more granular form and firmer.

H. G. V. P.

Alfalfa and Kidney Trouble

IT is possible for the feeding of green alfalfa to develop kidney trouble in horses. This is brought out by the recent letter of a Kansas reader. His thirteen-year-old gelding seems "run down and lifeless—urine has a yellow sediment and sometimes looks bloody." The owner believes that the trouble was started by the feeding of green alfalfa this spring. When wild hay was given instead of alfalfa, there was some improvement. The grain feed is corn-chop.

There is little doubt that the green alfalfa was the inciting cause of the kidney trouble in this case, though doubtless there was a slight derangement even before that was given. The treatment I recommended for this animal, which would hold good in similar cases, was first to change the corn-chop to oat-chop and procure some flax-seed, steep a pint of it in two gallons of water and use about a pint of it in wetting his oat-chop. Also procure from the druggist a bottle of sanmetto and place a tablespoonful of it in his drinking-water twice a day. In case he manifests pain in urinating, give him every morning and evening in his feed a tablespoonful of granulated sulphate of soda. Continue treatment until there are no further signs of trouble.

C. D. SMEAD.

Tone Up the System

AN OHIO subscriber asks what can be done for a cow that has developed scabby or waxy sores, first on her hind legs and later on other parts of her body.

This condition is usually the result of a general weakened condition of the animal, which makes her more readily subject to infection by the germs which cause the scabby sores. The first thing to do is to tone up her system generally. The following treatment should be given:

Drench with a pound of salts dissolved in a half gallon of water followed in two days by a quart of raw linseed-oil and another quart in three or four days. This will tend to place the digestive apparatus in the best condition. Then the cow should be fed well on a ration of corn-meal, two parts; bran, two parts; ground oats, two parts, and oil-meal, one part. In addition to this the scabby parts on her body should be washed thoroughly each day with creolin.

H. G. V. P.

November Lambs

[CONTINUED FROM PAGE 9]

extends from about the second week in March to April 25th, Easter following any time between those dates. The demand is for lambs ranging from fifty to eighty pounds. Highly remunerative prices can be relied on right into the summer. But Easter is the true harvest-time and the lambs should be in tiptop condition to meet it by April 10th. If a reliable local buyer can be found to offer near the market price, it is best to sell; though lambs are good travelers and will lose but little in a five-hundred-mile journey. The company of some of the ewes is a great help.

I have only space remaining to mention a few of the best authorities on the feeding and diseases and general care of sheep. I would advise every sheep-grower to consult United States Department of Agriculture Farmers' Bulletin No. 49, by the late Prof. John Craig, on "Sheep-Feeding," and Farmers' Bulletin No. 96, on "Raising Sheep for Mutton," by Prof. Charles F. Curtiss, director of the Iowa Agricultural Experiment Station. These can be obtained for five cents each from the Superintendent of Documents, Washington, D. C.—send coin, not stamps.

Of books, Dr. H. S. Randall's "Practical Shepherd" is the best I know of, for it contains the wisdom of nearly all the best sheepmen of two continents for one hundred years, as he very handsomely acknowledges, added to or tempered by his own experience. My own does not always agree with his, especially in regard to fully two thirds of the diseases he imputes to sheep, most of which I've never heard of, and he most unjustly libels the Scotch collie dog. Still, every sheepman should have the book. (Sold by the American News Company, New York City.) "Farm Animals," by Dr. E. V. Wilcox, in charge of United States Experiment Station at Honolulu, is a very good work; it is published by Doubleday, Page & Co., New York.

JNO. PICKERING ROSS.

With this article, Mr. Ross completes his discussion of the production of fall lambs for spring markets. In our next issue he treats of spring lambs for the mid-winter holiday trade.

EDITOR.



Your Buildings— Paint Them This Fall

WHEN the air is dry and the wood is dry is the best time to paint—that is in the fall. Then the paint sinks in and stays there. Dust doesn't bother. No insects to stick in the fresh paint. And you have winter protection. But be very careful to make your paint of

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Boys



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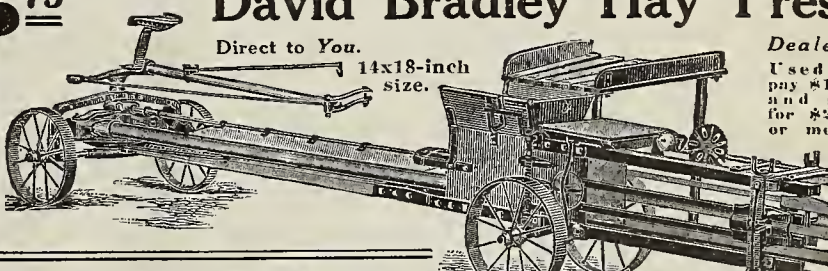
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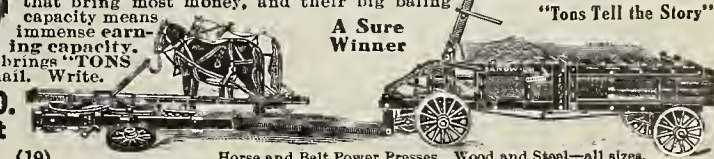
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Prices and Packers

BEFORE this reaches our readers the federal grand jury at Chicago may report their findings in the so-called Beef Trust investigation. It has been a sensational affair in some respects. The mysterious disappearance of books wanted as evidence in the case and the arraignment of prominent packing-house magnates for contempt of court in alleged obstruction of the course of justice have been charged with disagreeable significance.

There may be indictments before this is read, for conspiracy in restraint of trade. If so, the stock-raisers of the United States may well watch the evidence as it comes into court. During the Roosevelt administration, Secretary Garfield made a report which practically gave the Beef Trust a clean bill of health so far as extortion is concerned. It has been hard to point out just wherein Mr. Garfield was deceived or mistaken, but most of us have felt that he was both. The investigations so far made show that on the board of directors of the National Packing Company sit J. Ogden Armour, Arthur Meeker and Thomas J. Connors of Armour & Co.; Louis F. Swift, Edward F. Swift, Charles H. Swift, L. A. Carton and Frank A. Fowler of Swift & Co.; Edward Morris, L. H. Heyman and Thomas E. Wilson of Morris & Co.

It is easy to see that when this board of directors meets to decide what the National will pay on any given day for meat on the hoof, what they say amounts to an agreement for all the packers. It is clear that these eleven men are able to make the action of the National the pattern for all the big packing concerns in all sorts of arbitrary ways—if they desire.

It is to be hoped that the real facts as to the ways in which the markets are affected by arbitrary and combined action may be brought out. It is asserted that the case for the packers is made to appear fair and white to the public by arbitrary methods in estimating the cost of meat; that many valuable by-products are ignored, so that the net cost to the packer is made to appear much greater than it is; that all prices to dealers are based on these false values of inflations of them at the branch houses; and that there is a well-worked-out system of secret "signals" and "team-work" by which these operations are kept from public view.

It is asserted that when an independent gets naughty, the packers' combine punishes him by running up the price of stock, and when he is disposed of, they make up their losses by manipulation. Shippers everywhere feel that there is unfair rigging of the markets by which the bulges in price are made to lure in shipments, and the producers are then robbed by bear tactics.

We shall never be satisfied until these matters are sifted to the bottom. Those who have read both Mr. Charles Edward Russell's "Greatest Trust in the World" and Secretary Garfield's Beef Trust report are bewildered. Perhaps the truth lies somewhere between these two views—and perhaps Judge Landis' court is about to give it to us.

* * *

If you are blessed with a sympathetic nature, be sure you don't train it on yourself.

Because one mile of good road calls for another the farmer argues that it is time to begin to save money for an auto.

It is not safe to trust to luck nor to memory. One is as unreliable as the other. And both may serve you when you are least expecting it.

Each copy of your farm paper represents an outlay of several hundred dollars. That being true, it deserves careful study and preservation for future reference.

If you are feeding out a part of the new corn crop from the fields, as most farmers do, husk out the ends of the rows, so that turning will be easier when the main husking is in progress later on.

Politicians never get too busy to call on you at the right time—for their own projects. Return their calls, no matter how busy you may be. Make it a point to do this the very day and hour that things are being done at the primaries and the elections.

Virtue is its own reward, but a little cash helps out.

You can never satisfy your desires unless you know how to limit them.

The man who never owns to a mistake thereby makes a most foolish one.

The sickle of the mowing-machine sings a merry song in the fall of the year as it cuts the third crop of alfalfa.

"Service of Individuals"

THE value of every pound of farm produce west of Chicago to the Rockies—and to a degree far beyond these limits—is affected by the conditions on the wharves of the lake ports. Although the grain companies have their own wharves, the statement is true, even as to grain. In proof of this, it is only necessary to point out the fact that our wheat is shipped abroad as wheat, instead of as flour, because the railways control the wharves from which flour must be shipped, while the grain goes from docks owned by the elevator companies. Wheat goes, therefore, at lower rates than flour and very largely because of the private ownership of the docks and wharves of the lake ports there are shipped abroad in every bushel of this wheat twenty-seven cents in fertility, in bran and shorts, that should be fed here to the upbuilding of American farms. And many American mills are standing idle. All this leads up to the story of Major Rees of the Corps of Engineers of the Army, and the harbor work of Chicago.

Major Rees has been doing good work in Chicago, where they are trying to work out a plan for publicly-owned docks instead of railway-controlled docks and the people of Chicago set up the long howl of protest when it was rumored that he was to be removed. But General Bixby, Chief of the Army Engineers, was firm. Major Rees must go to the war college, where they plan campaigns that never take place, and study how to invade Brazil and to repel the hosts of Canada—when they invade us. This is important work; but listen to what General Bixby says.

"There is unanimous demand for the retention of Major Rees in Chicago," says he. "But the service of the nation is paramount to the interests of individuals. The government is training officers for warfare and periodically the War Department selects officers of promise to send to the war college for instruction."

Think of that, as a disclosure of the army view as to the relative importance of internal improvements and army maneuvers and war games! The improvement of Chicago's harbor, "the interests of individuals!" The studies of the war college "paramount" in the nation's welfare! Well, perhaps it is a good thing for us to know just what those in authority over our river engineers think of the importance of their work. Whether an engineer is an officer of promise can be told only by the way he does his work. General Bixby's statement amounts to an assertion that whenever a man does good work in river and harbor improvement he thereby becomes liable to be called to the war college. And this attitude, perhaps, accounts for the unsatisfactory status of internal improvements after three generations of army control.

Let us demand a civilian board of engineers for this work, who will not be removed as soon as they begin good work. It is not military work anyhow. Such work should be in the hands of men who regard it as the greatest work in the world "for the national welfare."

* * *

Many troubles seen coming down the road pass by without stopping.

When hoops come off barrels, hoop them with wire. Cheaper than buying new barrels and anybody can do it.

Rattle a log chain down the chimney and get the soot out before it burns out, and maybe burns the house, too.

The man that puts a lot of cider in his cellar to get hard may be laying up something for his boys that can not be kept in barrels.

The Accredited Baby-Killers

THE government has declared that a lot of medicines which have been widely advertised are baby-killers.

And a lot of the papers which used to advertise them are now making a virtuous appearance by jumping on the poisons when they are down.

This paper does not carry the advertisements of the poisons either before or after the government condemns them.

In order that every mother may know what the government chemists have pointed out, we urge upon our readers to remember that "Mrs. Winslow's Soothing Syrup," "Children's Comfort," "Dr. Fahey's Pepsin Anodyne Compound," "Dr. Groves' Anodyne for Infants" and "Kopp's Baby's Friend" contain morphine sulphate; "Dr. Fahrney's Teething Syrup" contains morphine and chloroform; "Dr. Fowler's Strawberry and Peppermint Mixture" contains morphine; "Hooper's Anodyne, the Infant's Friend," contains morphine hydrochloride; "Jadway's Elixir for Infants" contains codein; "Dr. James' Soothing Syrup" contains heroin; "Dr. Miller's Anodyne for Babies" contains morphine sulphate and chloral hydrate; "Dr. Moffett's Teething Powders" contain powdered opium; "Victor Infant Relief" contains chloroform and cannabis indica.

All these are poisons. No matter how much the baby cries, the mother who gives them commits a dreadful mistake. If she gives any of them knowing their character, she commits a crime. All of them have men with money behind them, and they will be pushed in the future as in the past—but some of them under other names. Don't give your babies any "soothing" or "quieting" medicines. And don't take papers that advertise them.

* * *

Lots of self-made men, so-called, have had help from their wives.

Are you planning your work so that the boys may attend every day of the fall term of school, or with a view to keeping them out of school about one half of the time to help you?

Wooden feed-baskets and buckets around the barn would last from twice to three times as long if given a good coat of cheap paint; not so much because of protecting the wood, but for the reason that the paint tends to prevent the staves from shrinking and falling apart.

A Legal Age for Calves and Lambs

A CURIOUS proposal was put forward by the United Master Butchers of America at their convention in Chicago last month. A Chicago daily reports it as follows:

Blaming the scarcity of cattle and the non-payment of butchers' bills for the high cost of beef, the United Master Butchers of America yesterday adopted resolutions urging the following:

Legislation to prohibit the slaughter of calves and lambs during the months of March, April and May. In a short talk to the butchers, Charles G. Deibel of St. Louis declared the blame for the high cost of beef rested with the wholesaler.

A proper conservation of cattle in this country would be in a measure obtained, he declared, if the calves were allowed to grow more before being killed.

Action to arbitrarily bar these staple, healthful meats from consumers during one fourth of each year would be nothing short of a gastronomic calamity. And advocacy of such action coming from an organization supposed to be conversant with all the ins and outs of meat production will furnish fresh food to the suspicious that such action is merely another veiled move to further manipulate trade for a purpose.

Legislation to compel stock-raisers to hold over an animal beyond its time of most profitable disposal would be un-economic and an absurdity. Prolonging the life period of calf or lamb to such a time as shall materially increase the country's meat production can only be expected when the net profit realized from the older animal exceeds that from the younger. In other words, the nimble sixpence will continue to be preferred to the less agile shilling.



NO DOUBT you have heard more or less about the amiable sentiments which the devil entertains for holy water? Well, they aren't a circumstance compared to the deep-seated amity which prevails between Dr. Harvey W. Wiley and his chiefs of the Department of Agriculture.

Doctor Wiley is the chief chemist, to be specific about his job. But it doesn't make much difference by what name you call the job; if he were janitor or chimney-sweep, his function would be all the same. He is the national guardian of food-supplies, and there seems to be no way to keep him from working at it all the time. A recent effort to lock the watchdog up in his kennel came to grief, to the embarrassment of some eminent officials.

The chief difficulty about managing Doctor Wiley is that he doesn't mind about losing the job. It pays five thousand dollars a year, and there are a score of corporations in the country that would pay him five times as much to work for them—and peddle out his reputation for them, incidentally. It so happens that Doctor Wiley isn't willing to peddle reputation in small lots. He worked very hard for a long time to get the reputation he now has, and nobody has been able to make a long enough string of figures to even interest him in seeking another position than the one he now holds. The doctor just wants to be chief of the Bureau of Chemistry. He doesn't want to be secretary of agriculture or minister to Dahomey or alderman or chief of police or king of Montenegro or president of the United States. He would decline with thanks if the situation of czar of Russia were tendered to him. He wouldn't exchange places with Rockefeller or Carnegie, and he would laugh if somebody proposed to buy a senatorship for him.

No, thank you. There is just one job that Doc Wiley cares a sou for. And he has that job. And, having it, he doesn't care a sou whether he keeps it or not. Odd? Yes; but not so odd, either. Doc Wiley has a theory that no job is worth having unless you HAVE it; it must be your job; you mustn't be its man. It mustn't be bigger than you are; you must be bigger than it is, and you mustn't let anybody, except you, run it.

Dr. Wiley "Hurts Business"

That is the theory on which he runs the job of the Bureau of Chemistry. And, running it that way, he has probably tramped on more million-dollar toes than any other man in the government service. Every toe that has been tramped on its attached to a foot which has ardent inspiration to kick the doctor out of his government job; and all of 'em together haven't been able to get by with it yet, and don't seem likely to.

"While I'm chief of this bureau, bet on me running it; now, get me fired if you can," is about the motto of Wiley.

And they have been taking him at his word, for several years. They are going to get him fired if they can, and fighting has been good in all the Wiley vicinage ever since he started out to get a national pure-food law passed. Wiley wants to cling to the position just so long as he can use it to his own sweet will for the purpose of propagating the pure-food doctrine; and after that he doesn't care for it. But, meanwhile, he is just tickled to death to fight about ten hours each day for the privilege of staying.

It took some twenty years to get a pure-food law passed, and Wiley was the biggest factor in getting it done. He had been a joke for a good many years, with his efforts and pronouncements and utter lack of authority to accomplish anything. Well, the day the pure-food law passed, he ceased to be a joke and became an Awful Fact. The people who used to embalm food-stuffs for us and then sell it in artistic packages at fancy prices as health restorer, saw instantly that he was a Solemn Thing. They must get around him, or he would presently ruin the market for formaldehyde and force all the embalmers to leave the food business and confine themselves to undertaking as a profession. So they got busy.

As chief chemist, Wiley was the boss enforcer of the pure-food law; but, of course, he was subject to his superior officers, the Bureau of Chemistry being under the secretary of agriculture. So it turned out that anybody with superior rank could interfere with Wiley. There was a pure-food board, composed of the secretaries of agriculture, the treasury, and commerce and

labor, which must approve all regulations, and, finally, the President, of course, could do or undo anything he liked.

Wiley fought for his way with assistant secretaries and law officers and other people, for the first year; and when at last it was apparent that he was going to have his own way, they created a new Food Law Board in the department, composed of the chief chemist, an assistant chemist and the law officer of the department. Each member of this board had a vote, and Wiley presently discovered that the other two members were extremely liable to agree, and he to disagree, putting him in a minority.

That was bad; but Wiley fought along, and from time to time got his way about various things. He made a terrific muss, by insisting that whisky ought to be whisky, which was so manifestly unreasonable that both Roosevelt and Taft, and their respective attorneys-general, have been forced to great pains and labor to show that it is illogical and unenforceable. So now we can be sold almost anything colored like cold tea and with plenty of alcohol in it, as whisky, and if it kills us, why—well, we ought to have been abstainers, anyhow.

But I wasn't going to tell about that. I intended to explain about the funny trouble the attorney-general of Indiana had recently in extracting some testimony out of Doctor Wiley. It seems to have a moral, and the moral is that almost everybody in the government, aside from Wiley himself, seems persistently devoted to ruining the pure-food law as fast as possible. Now for the story.

Doctor Wiley, soon after the pure-food law passed, experimented extensively on the use of benzoate of soda as a preservative. He tried it on his "poison squad" of young men, and, finding that it was bad for them, issued an order that it must not be used as a preservative—that it was injurious to the health and was one of the articles which the law was intended to inhibit.

Beneficent Benzoate

There being an immense business in preserving things with benzoate, an awful roar was raised, and finally Mr. Roosevelt rigged a scheme for a "board of appeal" in chemistry; a sort of supreme court, so to speak, to which cases could be taken up if folks didn't like the decisions of Wiley. Prof. Ira Remsen, chief chemist of Johns Hopkins University, was placed at the head of this board, with a long list of very high-browed other professors of chemistry as associates, and they were told to get busy and see whether Wiley was right about benzoate.

It took them something like a year and a half, and then they made a report that was fearful and wonderful. They found that benzoate, far from being harmful, was mighty fine eatings; they couldn't see that it would hurt, in any quantities; certainly not in moderate ones. They found that there was no need either to prohibit its use or to limit the proportions of it that might be used. In short, they took down the bars and turned Wiley's flock of black sheep all out.

Mad? Doc Wiley was something awful for mad. So were all the other pure-food sharps of the country; state food officers, etc., who had figured on benzoate and found it bad to eat. So it came about that, as the national government wouldn't prohibit it, a lot of states tried to pass state laws against it. Indiana was one of these states, and that is where my story really begins.

The food manufacturers and dealers, interested in benzoated products, promptly attacked the new Indiana law on the ground that it was unconstitutional, interfered with their business and amounted to confiscating their property invested in the business. The state authorities replied that the law was merely intended to protect the public health by preventing the purveyance of an article injurious to the health.

The question of fact was thus sharply raised, whether benzoate was or was not harmful. The manufacturers brought forward some nineteen pounds of the reports, testimony, decisions and opinions of the Remsen board, to show that the greatest chemistry authorities found it harmless. The Attorney General of Indiana, Mr. Bingham, retorted by producing a lot of the pronouncements of Doctor Wiley on the subject, data from the experiments of the poison squads of both Wiley and the Remsen board, etc., and he announced that he was going to produce Doctor Wiley in court, as a leading witness to show that the stuff was the staff of death.

Accordingly, Attorney-General Bingham applied to the Department of Agriculture to send Doctor Wiley and his assistants to testify in the case at Indianapolis. The request was curtly refused. Secretary Wilson was not in Washington at the time, and the business was handled by Assistant Secretary Hayes, and the law officer of the department, Mr. McCabe. That was quite a blow to the Indiana authorities, but it wasn't so sharp as the one which befell them when they presently learned that the department was permitting the pro-benzoate Remsen board members to appear and give testimony in favor of the manufacturers' side of the case!

The Indiana man was certainly hot under the collar when he discovered that the department was loaning its pro-benzoate authorities to help the manufacturers, but was unwilling to let him use the greatest anti-benzoate expert of them all. So he pressed the matter, and finally was informed that if he wanted Doctor Wiley's testimony, he would have to come to Washington to get it.

And when he got here, he was told by the department that he couldn't have Wiley's deposition, anyhow; he would have to go into court and get an order summoning Wiley, from the District of Columbia courts!

Still Mr. Bingham thought the opposition might be pro forma and mechanical. He didn't believe the department would actually appear in court by counsel, to prevent his getting the order.

But that is just what the department did!

The Lid is Jolted

Assistant District Attorney Pelle was on hand, to tell the court that there was no reason why Wiley should testify in the Indiana case and that the government didn't want him to do so. Mr. Bingham was mad enough by this time to argue in Chinese, and he did it. He told the court how the department had treated him in the whole matter, insisted that it was very necessary to him that he have the Wiley testimony, and in the end, despite the insistent opposition of the department's lawyer, Judge Barnard issued the order, directed to the department, to send Wiley to give his testimony.

Then later, while Wiley was testifying, the question rose of getting access to certain records, etc., of his "poison squad" experiments, and the department found itself able once more to cause delay and difficulty. The records were ultimately produced, but not until the department had further exhibited its hostility to every effort to sustain the Indiana law.

When they got Doctor Wiley on the stand, Attorney Willis Baldwin, representing the food manufacturers who insist that benzoate makes things nicer, asked Wiley about his experiments, and observed:

"These tests were immensely important to the business world; they involved many hundreds of thousands of dollars' worth of property and products."

"What I am interested in," replied Doctor Wiley, "is the health of the people."

"You consider that more important than the interests of people who have hundreds of thousands of dollars tied up in this great industry, do you?" demanded the lawyer.

That was the place for one of Doc Wiley's best explosions.

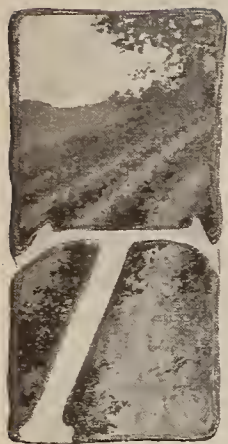
"I should say I did," replied he, looking right through the lawyer. "Where there are hundreds of thousands of dollars on one side, there are millions of lives on the other, and I am interested in these lives, not in any corporation's business."

They had Wiley testifying a long time, and the Indiana people got all they wanted. The case kicked up a huge row, because the department was severely criticized for its hostility to the Indiana law, and a series of statements were issued, explaining all about it. But, in its last analysis, the whole thing amounted to just what I have said about it: The department authorities didn't want the Wiley testimony to be taken in the Indiana case, because, apparently, the department is in favor of benzoate, and Indiana is against it. The whole proceeding seems mighty queer and has caused a deal of unpleasant remark. The truth is that the pure-food law has been suffering at the hands of the people entrusted with its enforcement ever since it was passed. Wiley, almost alone, has stood out for making the most of the measure, and almost everybody concerned with it seems to have been opposed to him, not excepting Presidents Roosevelt and Taft.

The Healing of the Hills

A Two-Part Story—By Winifred Kirkland

Illustrated By Robert A. Graef



Part I.

THE July sun lay broad and warm on the stretching acres of Roy Pratt's berry-farm. Already, at nine o'clock, the blue-white river mists in the valley below were burning away to a clear sultriness. The farm lay in a cup of the hills, its slopes sunny and sheltered. The berry-bushes stretched in straight green ribbons across the fields, and between their rows the soil showed, clear-harrowed and red. The raspberries flecked the green of the bushes with crimson and smote the air with their pungent ripeness.

Distributed each to a numbered row, a hundred people, chiefly women and girls and small boys, did not show as an unusual crowd on the little farm. Sunbonnets and broad hats bobbed about among the bushes. The place was alive with neighborly greetings and high-shrilled exchange of gossip from row to row. Up there on the sunny slopes, no one took berry-picking very seriously. Pickers stopped often to trudge down to the great chestnut-tree under which were placed the lunches in many bundles, poked at by stripling turkeys and chickens. Under the tree stood a sweating milk-can filled with ice-water, in which bobbed a bright dipper. It was a thirsty crowd, liking to squat in a group close to the milk-can and, fanning itself with sunbonnets, chat comfortably except when interrupted by some small urchin flinging a shower of icy drops over some unwary one. But when Roy Pratt showed his long legs striding down from the barn or up from the house, the group under the trees scurried back to places in the ranks in a discomfiture shrill and frank and merry.

Roy Pratt's person might have been culled from the burlesque stage. There were six lean, long feet of him. He was usually dressed in blue overalls, the sleeves of his collarless shirt rolled up from his lean, fibrous arms. His hands and feet were huge. His face was lean and long and long-nosed. He was tanned red, except where his wide straw hat, pushed back, showed the top of his forehead white and pure-veined as a baby's. His usual expression was a vacuous grin, but the grin was histrionic merely, befitting his chosen rôle of clown. His eyes, too, were wide and blue and innocent, but had a keen glint when time demanded. He was awkward as a young colt, but could caper, flinging his long limbs about, as limber as a jumping-jack. At twenty-five he was not grown up, given sometimes to racing from end to end of a field with great loping steps for pure joy of movement, given also sometimes to standing still, struck quiet all of a sudden by the first sunlight upon the fairy mists of the river down the valley. "Gosh," he would say to himself, "ain't that purty tho'!" and then try to shake himself free of the sudden shyness which had made his face hot.

The girls of the hillside knew Roy as he knew himself, a cheerful buffoon. He welcomed a group of berry-pickers this July morning in his big booming voice. "Hello, girls! How much'll you take for all the berries you eat? Go ahead, enjoy yourselves, but leave a few." Then as he peered into sunbonnets, "Where's Lidy? Late again?"

"Yes," some one started to say, but was swiftly interrupted by some one else with a gesture for silence and a wink of the eye. "No, she ain't. Lidy's over yonder. That third row above, don't you see, with her back this way, at the end."

"Is that Lidy?" asked Roy.

"Yes."

"What's she doin' 'way off there by herself?"

"Waitin' for you, perhaps. Why don't you go and see?"

Roy made a dash at the saucy speaker, thrusting a long arm through an opening in the bushes and overturning her half-filled basket on the ground. Before she could dash down to the end of the row and around it and after him, he had gone, striding to the third row above. There with long noiseless steps he advanced upon the figure at the end. Stealing on unperceived, he snatched at the sunbonnet and pulled it back.

The girl turned around upon him, and it was not Lidy, black-eyed, laughing, brown and ruddy as a gipsy boy; it was not Lidy at all, but a stranger, a girl whom he had never seen before, a girl unlike any he had ever seen. He fell back, feeling in his throat the same catch he felt when he looked down from his hills upon the river fog, for the girl's face was delicate and fine, pale and strange, as the mist. He saw in swift vision that her hair, of faintest gold, was swept back from her forehead into great braids at her neck. He saw that her shirt-waist was dainty and crisp, that her hands and arms, bare and very white, had been scratched in long red lines by the thorns. But these things were not what he saw really. He saw that her clear gray eyes were burning, her lips breathless. Her swift recoil at his touch tingled through him. He knew that this was a girl who would not let a man touch her. Still something else in her face in that moment of sight smote through the careless, wholesome sunshine of the July morning—he knew he should never have rudely torn away the covering that shielded a face at the same time so young and so tragic, yet so beautiful.

Hot with shame, he stammered out, "I didn't go for to touch you—honest! I thought that you was Lidy."

Relief showed clearly on the girl's lips, but she did not say a word, merely turning away from him back to her berry-picking. He himself shuffled away, noting in passing the number of the row on the little stake stuck in the ground. As he stooped to search for the number, he heard a titter of laughter from the group of girls he had left a few moments before. He knotted his fist at the sound, and not turning to look back, scanned the fields, searching for old Moss, the man who helped him in assigning the berry-pickers to their rows and in keeping account of their baskets.

Old Moss held the dirty copy-book in which the names were entered.

"Who've you put in 314?" asked Roy, coming on him. Old Moss began to peer into the pages, tracing the lines with a greasy stump of lead-pencil. Roy snatched the book away and, wetting his thumb, turned the leaves swiftly.

"Here she is. 'July 19—314—Mary Pemberton.' Who's she?"

"Dunno," said Old Moss. "I recollect her now, though. Never see her afore. But she can pick like a house afire. Reckon she's one that wants to make something."

"She don't look right strong," mused Roy. "If she comes to-morrow, you put her where it's shady—down by the stone wall somewheres." He did not speak to the girl again that day.

Ragged and piled high with a tangle of vines, the old stone wall skirts the orchard whose trees shade the nearest berry-row. They were mowing the orchard hay, and the high sing-song of the mowing-machine smote monotonously upon the air. Sometimes a locust shrilled or a humbeebie went droning by. Sometimes the whistle of an oriole upon an apple-bough made Mary Pemberton's throat tighten suddenly at the jubilant clearness of its joy. To right and left, at either end of her berry-row, she could look off to misty hill lines. Cool hill breezes touched her face. The great



"The girl turned around upon him
her clear gray eyes were
burning, her lips breathless"

expanse of sky above her brought strange restfulness to her unaccustomed eyes. The other berry-pickers, whose voices hummed in the distance, were so far away that she felt almost alone. Once at mid-morning she stood up straight, pushed back her sunbonnet, drew a deep breath. "It smells so sweet," she whispered. But at that very instant she drew up her sunbonnet and turned swiftly to her picking, for she had seen, striding down upon her, the same tall figure of yesterday. Roy carried a wooden tray on which he was collecting the red berry-boxes for the crates. Mary Pemberton did not turn her head.

"Mornin'," he said awkwardly.

"Good-morning," she answered. Her voice was sweet and as clear cut as her face. She picked swiftly. Roy lingered.

"Old Moss put you in a pretty good place this morning?" he inquired.

"Yes," she answered without turning, "it's nice and cool here."

"It's purty, too, over here. I kind of thought you'd like it."

Mary made no reply. Suddenly Roy blurted out, "Say, you do pick fine!"

"Do I, truly?" She turned full around. He saw she was very young, for it was the round-eyed face of a child pleased with praise. "I never picked berries before yesterday," she said.

"Never picked any berries before! Why, where you been raised?"

But at his question she turned from him, sudden apprehension making her face a woman's once more. She did not speak again, and he, after waiting a moment, picked up her berry-baskets and went swinging back down the row. Half-way he turned around and shouted, "Say, don't you git hot to-day. Stay in the shade. Take keer o' yourself."

As he spoke, he turned sharply to his right, for a face was looking into his, a warm young gipsy face

peering through a frame of green berry-leaves. Her blue calico dress was turned down at her full brown throat. Her sunbonnet was struck back from her rich black hair. But she was not laughing. Her black eyes were grave and strange, intent on his.

"Hullo, Lidy!"

"Hullo!"

"What ails you to stare at a fellow like that?"

"I dunno!" The tone was not petulant, but merely honest.

"Say, Lidy, you know her?" Roy shrugged one shoulder in Mary's direction.

"No."

"Know who she is?"

"Yes."

"Well, why don't you tell then?"

"She's Jim Stephens' granddaughter, over to Southam Village."

"Didn't know he had a granddaughter."

"Yes. His daughter, she ran away and got married to a man in New York and ain't never been home since. This is her girl an' she ain't never been here before."

"Is that all you know about her?"

"I don't know much about Southam," answered Lidy, trying to make her tone imply that she had told him all she knew.

"It's a good bit of a walk from Southam," meditated Roy. "Must be six mile."

"A good six mile." And with this Lidy left him and went skimming down the narrow green alley, her lithe muscles rippling beneath the limp calico. At nineteen Lidy Clark was more boy than woman.

Only once more that day did Roy see Mary Pemberton. It was at the noon-hour, and Roy was on his way to dinner down at the farm-house standing below the chestnut-tree at the bottom of the cup formed by the farm. It was his custom not to take his way along the outskirts of the crowd of berry-pickers sitting on the shady slope beneath the tree eating their lunches, but to stride straight through them as they sat. They would always laugh and protest, bobbing to right and left to get out of his way, while he was proud of planting his great steps so carefully as to touch no one, like a cat moving among the china on a shelf. But to-day Roy drew to the side of the crowd, for he had seen a girl sitting all by herself, lunch on knee, apart from the rest. He stopped in passing.

"Well, you look kind of lonesome," he said. "Don't you know nobody here?"

"I know some," she answered quietly, not looking up.

"Why don't you go set with 'em then?" he asked.

"I'm nearly through now," the cool, clear voice answered.

"Come on," he said, in rough hospitality, "I'll make you acquainted."

She flashed one imploring look up at him as he stood above her, then dropped her eyes, begging, "Please, please, go on. Don't stop here."

Then suddenly he became aware that the chatter of the crowd had stopped completely. All eyes were turned upon himself and the girl. Sudden hotness tingled along his spine. Mary's appealing look and words, that watching silence over there—it was not on his own account that he cared, but because he had made it harder for her.

Helpless and mystified, he hurried on down to the house. He did not know why at dinner he could not ask his mother or sister what they knew of Mary Pemberton. Afterward he was always careful when and where he spoke to Mary—and about her.

That week and the next Mary Pemberton still picked berries in the shady rows assigned to her. Each day the soft hill lines grew dearer to her. She walked with lighter step than when she had first come. Roy noticed, too, the faint tan that had touched the pallor of her cheeks. Although known as the swiftest picker of all, Mary no longer picked with feverish energy as at first. She stopped oftener now to look about her, to breathe deep, to listen to the rustle and hum of the fence-row.

Although she had never lived upon the hills before, already the orchard had come to have a comforting familiarity. Sometimes she rested her arms upon the stones of the fence, and looked down the rows of twisted apple-boughs. As she stood there one morning, an oriole suddenly sang out. She turned her head a little, waiting for the next note. Just then Roy, coming quietly upon her, for the first time saw her smile. The smile on her little sad face was like the flickering of sunshine through the rain. Roy, himself loving the oriole, boomed out in his great man-voice, "He feels good, don't he?"

At that the smile was gone, the gravity there again. She turned back to her berry-picking.

"All the same," muttered Roy to himself as he went on, "I don't believe she's as scared of me now as she was at first."

Still her loneliness, as he saw her sitting apart at the noon-hour, troubled him, and the sidelong glances of the girls when she passed a group of them. Roy knew the girls could be cruel, but he had never before seen them cruel to a girl like that. One day he tried an experiment. Without explanation, he put Lidy in one of the distant shady rows, next to Mary Pemberton. Lidy fully understood. At the end of the day she came to him.

Her honest boy-eyes met his straight. "I tried, Roy," she said, "I tried to talk to her, but she wouldn't."

[CONTINUED ON PAGE 16]

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Conducted by Sam Loyd

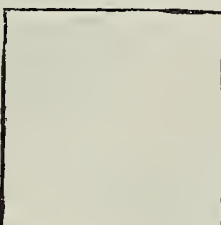
Practical Lesson on Puzzles

THOSE who aspire to strengthen their
mental powers by puzzle practice, as
well as to learn to produce puzzles
which might become remunerative, should
realize the significance of the familiar
saying: "There are puzzles and there are
puzzles." The old-time enigmas which
say that "My 1, 7, 3, 6, is a species of
cow," may be useful as stepping-stones
to better things, but such kind of fodder
is not good as a steady diet. The best
mathematicians and inventors the country
ever produced were pronounced puzzlists
in their early youth. As Dr. Wilford
Hall, the eminent teacher, has said: "I
would rather have my boys go through a
course of puzzle work than to have them
go through college."

At the present writing two little gradu-
ates from puzzeldom, who lived on farms,
are astounding the world with their
mathematical powers.

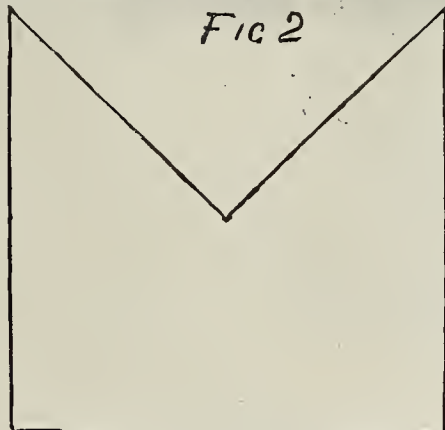
Cute novelties in the way of advertising
puzzles are in great demand, but they
must be strictly new without resemblance
to anything that has gone before. The
following was originated for a large real-
estate dealer, who said: "A man had a
farm which he wanted to divide among
his four sons, giving each one a piece of
the same size and shape. How did he
do it?"

Fig. 1



The second problem is somewhat simi-
lar, but more difficult: How did a car-
penter divide this board into four pieces
of the same shape and size?

Fig. 2

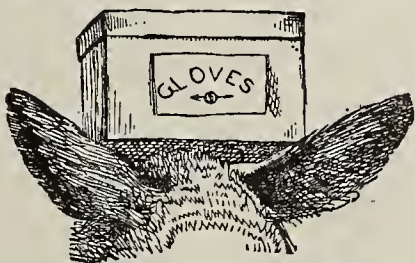


Some of Franklin's rebus puzzles were
very clever and will exercise the wits, but
not the mechanical skill like the others.

An old-time beau sent this pictorial
missive to his sweetheart. Can you
decipher it?



Here is another which may cause
amusement:



Johnny asked his big sister if she would
like some gloves for her birthday and
when she admitted that the gift would be
acceptable, the fresh kid handed her the
picture, saying, "Here's a package C. O.
D.—carried on donkey." "I see," replied
Sue, "and for your kindness I am going
to give you something that the picture
suggests."

Can you tell what Johnny got?

Concealed Geography

By way of recreation from work we
present another installment of the ever-
popular concealed geography where towns,
countries, rivers, etc., are hidden in the
different sentences.

102. The servant, Anna, polishes the
plate.

103. Fear lest you aim too low.

104. Is Theodore gone already? (Ter-
ritory.)

105. The power of riches terminates at
a certain point.

106. A coon climbed up an upas tree.

107. On the river Volga there lived a
man who was scorched by the Sirocco.

108. A peculiar aroma in every part of
this piazza is observed in the evening.
(State.)

109. I have a rough ague.

110. Ask me any question you like, but
I can't answer.

111. Prince Giglio left his love and
Bulbo's to Nelly Bly.

112. In my room a harness hangs.

113. Will Robert Douglas go West if I
smile sweetly on the earl?

114. If you put a hat upon a shovel, the
toads will wink. (Territory.)

115. A woman, called Miranda, named
her dog Victoria.

116. In rescuing the soldiers, he found
the last one hampered by the baggage.

117. I like no liquor so well as Triate
Sherry.

118. A woman dressed "à la mode"
Nature would never recognize.

119. Let the glorious King Philip arm
a fleet instantly.

120. Having broken my right arm I
landed without effecting my purpose.

121. A red-fringed Stanhope rug I
anticipate by the next steamer.

122. Here, girls—Mag, Deb—urge on
the cows.

123. I never could fancy prussic acid.
(Island.)

124. The magnanimous hero bleeds for
his country.

125. In scanning, the Pyrrhic and
Tambus are seldom used. (Island.)

126. An apple without a core, a pig
would not reject.

127. A negro from Congo, Shenstone
immortalized in his poetry.

128. A filigree ceinture adorned her
lovely waist. (Country.)

129. An over-ripe cucumber never is
fit for the table.

130. Gerzom was a huge or giant crea-
ture of antiquity. (State.)

131. O, Catapult! O, vast and mighty
engine!

132. Let us form a convention to
ameliorate the condition of the Chinese.

A Rebus

Short was my life and brilliant my career;
Behad me, I in lovely green appear;
Behad again, I once was made to save
My chosen inmates from a watery grave.

A Charade

A word, I know, will quickly show
What wicked people are;
And when transposed, will be disclosed
A name they always share;
Transposed aright 'twill bring to light
What all would wish to do;
If altered now, 'twill fairly show
What hides them from our view.

Somewhat Mathematical

"Honorable Mrs. Chairman," said the
secretary of a suffragette meeting, "the
call for a standing vote showed the motion
to be carried out by a majority equal to
one third of the opposition, but as that
result was due to a lack of chairs to
permit eleven members from sitting down
so as to record their votes in the negative,
we wish to report that we find the minor-
ity has defeated the motion by a majority
of one vote."

Can you tell just how many votes were
cast at this meeting?

NOTE—Now, let every one send in their
answers to the puzzles this month, as we
desire to distribute some books which will
help our young friends to construct the
right sort of puzzle. You do not have to
guess all the answers, just show your
ability by solving a few.

Fifty prize puzzle books will be sent to
those sending the best answers to Sam
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When answering the puzzles be sure to
tell what books you have received so as
not to receive duplicates.

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"GILT EDGE" (contains all) for blacking and polishing
ladies' and children's boots and shoes, shines without rubbing, 25c.
"French Gloss," 10c.

If your dealer does not keep the kind you want, send us his
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signs, prices and
complete information.
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PUZZLED

Hard Work, Sometimes, to Raise Children

Children's taste is oftentimes more ac-
curate, in selecting the right kind of
food to fit the body, than that of adults.
Nature works more accurately through
the children.

A Brooklyn lady says: "Our little
boy had long been troubled with weak
digestion. We could never persuade
him to take more than one taste of any
kind of cereal food. He was a weak
little chap and we were puzzled to
know what to feed him on."

"One lucky day we tried Grape-Nuts.
Well, you never saw a child eat with
such a relish, and it did me good to see
him. From that day on it seemed as
though we could almost see him grow.
He would eat Grape-Nuts for breakfast
and supper, and I think he would have
liked the food for dinner."

"The difference in his appearance is
something wonderful."

"My husband had never fancied
cereal foods of any kind, but he became
very fond of Grape-Nuts and has been
much improved in health since using it."

"We are now a healthy family and
naturally believe in Grape-Nuts."

"A friend has two children who were
formerly afflicted with rickets. I was
satisfied that the disease was caused by
lack of proper nourishment. They
showed it. So I urged her to use Grape-
Nuts as an experiment and the result
was almost magical."

"They continued the food and today
both children are well and strong as
any children in this city, and, of course,
my friend is a firm believer in Grape-
Nuts for she has the evidence before
her eyes every day."

Read "The Road to Wellville," found
in pkgs. "There's a Reason."

Ever read the above letter? A new
one appears from time to time. They
are genuine, true and full of human
interest.



OUR YOUNG FOLKS' DEPARTMENT



Flower Stories From Fairyland

By Alice Jean Cleator

Fragment I.—How the Pansies Got Their Faces

ONCE upon a time, it is said, some fairies were returning by moonlight from a midnight frolic. They paused to look at a lovely garden where grew many beautiful roses, monarch poppies, irises and pansies. The larger flowers did not appeal to the fairies, but with the pansies they were delighted.

They hovered about the pansies, gazing upon them with bright, admiring eyes. The next morning it was found that the reflection of the quaint little fairy faces was shining upon the pansy flowers. Some faces were gay and laughing, some thoughtful and eager-eyed. For this reason the pansies are sometimes called "the fairies' flowers," and are one of the dearest favorites of the children.

Fragment II.—The Fairies' Quarrel

THE fairies once met to hold a grand banquet and to elect a king. They met by moonlight in a wide meadow, sweet and fragrant with the breath of summer. The banquet was to be served on tiny plates of gold.

As the banquet was being served the fairies began to discuss who they should elect for king of Fairyland. Some wanted one and some another. The discussion became very spirited, at last growing to a decided quarrel.

Suddenly the fairies in anger took their little golden plates and dashed them down upon the moonlit meadow. In the morning the fields were shining with bright yellow flowers, as if carpeted with sunshine. The golden plates had been turned to lovely dandelions.

Fragment III.—The Ill-Natured Poppy and the Everlasting Flower

ONE summer in a pretty little garden-plot a mass of scarlet poppies grew side by side with some flowers that had no bright color, but were of a pure, pearly white.

The poppies' rich scarlet glowed with fiery beauty against a dark mass of evergreen shrubbery. Conscious of their splendor, they swayed and danced upon their stems like gorgeous silken butterflies.

"What is your name?" haughtily asked one of the poppies of its paler neighbor.

"Alas, we have no name," was the meek reply.

"Likely that is because the flower fairies never thought you worth giving a name," cruelly remarked the poppy. "Our name is poppy, and there is no more charming flower in this garden. Dear me, how pale your cheeks are! And your shape is much like the common field clover! Who would ever think of gathering you for a bouquet?"

The white flower made no reply, and the day passed on. The next morning eager young voices were heard in the garden. Said one, "Oh, there they are! Those white flowers by that hedge of shrubbery! Auntie says they should be cut at once and dried for use in holiday decorations. They are so pretty in wreaths and crosses, when dyed in rare colors."

"Oh, see those charming poppies," said another voice.

"Yes," was the reply, "but they last only a short time. These flowers are always young. They are everlasting."

The poppy who had made the ill-natured remarks the previous day sighed deeply, for already her cheeks were fading.

The following winter the everlasting flowers, for so they were always afterward called, were smiling in beautiful bouquets and wreaths and crosses, helping to make the winter hours gay with color. But the poppies were only a memory!

Fragment IV.—The Thistle Children's Balloon Journey

"OH, MOTHER," whispered the thistle children one summer morning, "the meadow fairies tell us about their wonderful journeys. Why can't we travel, too? We are so tired of standing by the little brook all the time and listening to its tiresome song. And the same woodlands are always waving their green flags at us. There must be lovely sights beyond these summer meadows!"

"Never mind, children," replied their mother. "Only be patient. The meadow fairies will tell the autumn wind by and

by, and he will take you on a wonderful balloon journey as far as the fairies go."

So one bright day in October came when the skies were blue as those of May-day; the pine-cones were tumbling merrily down; the frost-elves had painted the trees with charming colors of russet-gold, crimson and rose-pink; red squirrel was gathering his stores of nuts, and the little white-footed mouse was hiding corn in the hollow trunk of an old tree. Then it was that the autumn wind called merrily to the thistle children.

"Come, I will take you on a wonderful balloon journey away across the meadow!"

So, wafted by the autumn wind, they sailed up and up in their tiny seed balloons. Up over the meadows, lit by the bright torches of goldenrod and wild lobelia! High above browning hillside and valley for miles they went in almost breathless delight.

At nightfall they sank on the soft grassy meadow to rest. It was not many days until a white blanket of snow was spread softly over them. That was the last the thistle children knew until the warm south wind and fragrant April rain whispered low. "Wake up! Wake up, little thistle children! Spring is here."



A NURSERY JUNGLE.

By Ellen Sheedy.

When I go to bed at night,
You'd wonder that I dare
To go into the room at all
If I told you what was there.
There's an elephant and a tiger,
And a monkey and a bear;
A lion with a shaggy mane,
And a most ferocious air.
But I think perhaps my bravery,
Will not excite surprise,
When I tell you that their master,
In a crib beside them lies.

The Healing of the Hills

[CONTINUED FROM PAGE 14]

I've tried and it's no good, so that's enough. Don't you never put me there again, Roy Pratt."

"Lidy," asked Roy, "what ails her? Why don't she make up to nobody? Why don't the girls like her? What's the trouble?"

The blue eyes as he questioned were earnest and innocent as a child's. To keep them so, Lidy lied.

"It's her city ways," she said. "She's so stuck up. She don't want us, 'cause we're just country. And we don't want her if that's the way she feels."

Some such explanation as this had come to Roy himself. The girls were jealous of Mary's fine superiority. He was not one to resent her proud aloofness. He thought of her humbly as one frail and fine and remote, and always when he thought of her face, he saw its childlike loveliness when she was listening to the oriole.

Chivalry kept Roy from singling out Mary Pemberton with attentions, but yet always something was drawing his eyes, his feet, toward the berry-rows by the orchard wall. Still he never lingered there longer than he did with other pickers, not so long as he did with Lidy. Twice he slipped after Mary when she went home by the cross-country path through the woods, wonderful in the clearness of early evening, yet he had not found her there, though he guessed she must have hidden from him somewhere in the brown shadow. At last he decided just once to seek her out in the frank fashion of the hills.

The Sunday afternoon was drowsy with heat, growing more intense as the hill road drew near the valley and the river. Roy's buggy was newly washed, his mare newly

curried, he himself wore his holiday best: the brown store suit hung awkwardly on his lean figure, his long neck was encased in shining celluloid, his great hands protruded from the blue cuffs of his shirt. He held the reins loosely, letting his long back sag forward, while his free arm extended over the back of the seat. He longed for the pure air of his hills as he turned into the little river street which forms tiny Southam Village. The air was breathless, the whole place seemed deserted and was utterly silent except for the low roar of the mill-race below the gaunt stone mill, landmark for generations. The little low brown house at the end of the street was Joe Stephens', Roy had been told. It seemed to lie fast asleep in hot sunshine, but Roy, having tied his mare, knocked resolutely, once, then again. There was a sound of shuffling, shoeless feet, then the front door was opened with effort, and a bowed old man in shirt sleeves stood there. The boy of the hills stood looking down into the mean old face, the eyes blinking up at him in the sudden sunshine.

"Roy Pratt, isn't it?" cackled old Joe.

"How d'ye do? Come in."

"How d'ye do?" boomed Roy's great voice.

"Is this where Mary Pemberton lives? Is she to home?"

People said of old Joe Stephens that he was "as deaf as he had a mind to be." Now he made Roy repeat his question three times before he ushered him into the dusky musty parlor, while his stockinged feet shuffled back to the kitchen. The parlor was so dark that Roy could see nothing, and it was full of the close smell of the straw laid beneath the carpet. Roy stood there waiting. He heard the old man bawl up the kitchen stairs, "Mary! Mary! You're wanted. There's a young feller that's inquirin' for you here."

A light step sounded on the stair, and then

Prize-Winners in July Contest

THE winners of the two first prizes, which were cameras, were Irma Geer, age seventeen, Foss, Oklahoma, and Norman Radder, age fifteen, Sheboygan Falls, Wisconsin.

The following boys and girls received prizes of books and paints: Helen Martin, Berkeley, California; Loretta A. MacDowall, age seventeen, Richmond, Virginia; Earl Weatherford, age fifteen, Springfield, Missouri; Dora A. Schutt, age ten, Costa Rica, Central America; Imogen Rossiter, age thirteen, Belden, Nebraska; Harriet M. Blanchard, age thirteen, Mendota, Illinois; Gladys L. Sopp, age twelve, Los Angeles, California; Ray M. Dibble, age seventeen, Leipsic, Ohio; Richard Neale, age eleven, Rocky Ford, Colorado.

Besides these, several pictures were sent to contestants whose work showed merit.

The Letter-Box

DEAR COUSIN SALLY:—

We first lived in Indiana, and from there we moved to New Mexico, where papa commenced his work among the Indians. We lived there for about a year and a half. During this time we moved three times. We lived eighteen miles from any white person for almost a year.

We were surrounded by Indians and Mexicans. My brother and I had great times visiting the Indians. They were friendly at times, and I liked the Mexicans very well. They were always so nice to us.

We children never went to school during the winter, for there was none to go to. I learned to ride horseback and I just love it. From here we moved to Iowa. I would love to hear from some of the cousins.

Your loving cousin,

LEONA MARIE TALBERT,
R. R. 4, Tama, Iowa.

MY DEAR COUSIN SALLY:—

I received your button and think it very nice. I have tried to get my chums to join, and I think they will very soon.

Near our home is a spring about thirty feet across and the mosses growing up from the bottom give it a greenish-blue tint. It can be seen very plainly when the sun is shining and is called "Blue Hole." It has two outlets, one which runs past our farm and forms a falls, which once turned the wheel of a flour-mill, but has been burned down. No one ever learned the cause of its burning.

Your cousin,

MARGUERITE NEUSCHELER,
Castalia, Ohio.

there swept through Roy a swift hot sense of his own audacity. How had he dared to come? She was a girl who had given him no sign of liking, who had drawn close within herself at his approach always; a fine, frail thing, not of his kind, who scorned him. Would she look as she had looked that first day when he had torn off her sunbonnet?

Then he heard a snarling old voice in the kitchen, "See here, Moll, I won't have no monkeyshines with that young man. What's he here for?"

The low voice answered, "I don't know. I never asked him. I didn't even know he knew where I lived."

"Bah! But mind yourself. I'll have no nonsense here."

The threat fell like a whip, and when an instant later Mary, all in white, stood in the doorway framed in the blackness of the room, it seemed to Roy that she trembled as if she had felt the cut of a lash upon her naked flesh.

She stood there, not moving toward him. "Why did you come?" she asked.

"I come to ask you to go ridin'. I thought perhaps you'd like it. It's awful hot down here, but it's cool drivin' through the woods, up on the hills. Don't you think you could make up your mind to go?"

She drew back, shaking her head. Then they both heard the old man's voice as he muttered savagely to himself out in the kitchen, not unmindful of an audience. It seemed to Roy that Mary hesitated between the two of them, afraid of both.

"I'll go with you," she said. "Right away? I'll get my hat." He saw her pin it on before the glass in the hall, then she opened the front door and the two stepped out of the dark and the mustiness, away from the snarling old voice, into the sunshine.

[CONCLUDED IN NEXT ISSUE]

SUNDAY READING

Keep the Heart Cheery

By Edgar L. Vincent

How are you to-day?" I called to an old neighbor over the telephone. Back came the answer—and I could fairly hear the glad ring:

"Fine and dandy, as your boy's wife says! How are you?"

How could I be anything but "fine and dandy" after such a greeting as that?

Fine and dandy!

The neighbors say that is the salutation they always get over the 'phone whenever they call up this young farmer's wife. She ever tired? She a bit under the weather? She under the weather, be the weather what it may? Not a bit of it. Always "fine and dandy," although I know that sometimes she really is tired and ready to sit down for a while from the steady round of her household cares; but you will never get her to admit it. Always the same cheery ring in the voice. Always the sky fair and the world sailing along on summer seas.

And do you not suppose the neighbors along that line are catching the spirit? They, too, are coming to have the same cheery note in their calls over the wire; for, say what we may, courage and high spirit and happiness are just as catching as measles, and they never leave any bad effects, either.

There are lots of preachers in this world, and they are not all wearing a gown and standing in the pulpit to-day. You may go to church this morning and hear a splendid sermon. You may go away and tell Tom how it touched your heart and how sure you are that you will live a better life hereafter, and then by the time the sun creeps up over the hills to-morrow morning you will be wondering what it was all about. Gone with the shadows of the night! The ear which took it all in yesterday let it run away, and out at the other it has gone!

But other sermons will be preached to-day that you can not get away from to save your life. Down the road comes that dear good neighbor! What a lovely woman she is! Just to look into her sweet face is enough to make the soul mount up on wings as eagles. Her smile is winsome! The ring of her voice is music! Not a note of insincerity in it! All goodness, all helpfulness, all uplifting! When she goes back home to her own little round of duty, she has left something in your heart that will live and make you a better woman.

Or what is it that comes trilling in at the open window now? Yonder comes a man you know. He is just a simple soul. He never "will set the North River afire"—he doesn't want to. It would scare him to death if he did; but his heart is full of heaven. It ripples out in the tune he is whistling. His face is all aglow as he

halts in the road to call out after the friends and their health. Even his horses know all about it and they dream while he visits. Pure of heart, strong of purpose, right in his thinking, a tower of strength to all who know him far and near.

Oh, how the world needs more men and women with cheery hearts! It is so easy to say cutting things when the day is long and life weighs heavily on the shoulders. Do you know, I believe more people are killed by the poison of unkind words than by arsenic or any of the other so-called deadly drugs? A man must have a skin thicker than that of a rhinoceros to stand the darts these fault-finding, hypercritical folks speak. Never a word of praise for anybody. It was Charles Lamb who said of himself that he never heard a word from the Good Book read or spoken that he did not immediately think of something wrong about it. He could not help criticizing it and wishing it were a little different.

It is a bad habit and we never will fight a braver, better fight in all our lives than to kill that tendency, at whatever cost. How these harsh, often thoughtless, words do sting the soul! I would rather one would strike me with all his might with his clenched hand than to deal me a blow from his tongue when tipped with the poison of jealousy, hate or passion of any kind. And I do not think I am more sensitive than most of folks, either. We are all pretty much alike. Vinegar doesn't catch us, but a bit of honey—oh, how fine it is!

Are you a bit sore in mind or body this morning? Don't say so! Ring it out! "I'm fine and dandy!" Think you are well and happy, and you can't help but feel so. It is the man who believes he is well and strong who generally has good health. Perfect pictures of health before the mind will help to bring them into the body. Good, clean, pure words in the mind have a mighty power to strengthen the life and make it more like what we wish it to be.

Once in a while we get to thinking about our little round of work, comparing it with that of some who are called great by the world, and we wonder why we, too, were not born great. It doesn't pay to worry over that. If we are in our place and doing our level best, we will come out all right; but there is one really great thing every single one of us may do, and that is to keep a good, kind, cheery heart within us. If we do that (and we can if we will), we shall be happier ourselves and make the world brighter and better.

"How are you to-day?"

"Fine and Dandy!"

"Remember the Sabbath Day"

By L. D. Stearns

"REMEMBER the Sabbath day to keep it holy."

Just what does it mean, this fourth commandment?

I had a grandfather, a man of the stern old New England stock, a deacon of the church; six days of the week meant business to him, but on the next, with the donning of his clean shirt, he donned the Sabbath garb of holiness; grace was said at table and a chapter from the Bible read; apparently that was what the commandment meant to him.

I'm wondering, with a thrill of pity, if, when he came to see things as they are in God's country, he didn't find the keeping of every day entered irrevocably into the holiness of the First! for, friend, we can't push God out of our life six days and then, by a bowing of the head, a devout turn of the eyes, a word of Sabbath grace, bring Him into it on the next.

"But," you say, "the command reads, 'Remember the Sabbath day to keep it holy.'"

Granted. I'm only asking what, in its truest meaning, we can make of it, what God meant by holy?

I know a man who, on Sundays, is all that is devout, but on six week days—be-ware!

Ah, it's not mapped out by just one line, reaching from Saturday night to Monday morning! It's getting up Monday morning with a smile; it's going to the office with honor high to the front; it's steady worth and integrity, no matter how sharp and keen the tread-mill of the

day may grind; it's giving your every-day best to the world—meeting adversity without a whine—reaching a hand of honesty and good will to the world, that fits one at the week's end to bring to the Sabbath a heart and soul that make it a holy Sabbath in the God sense of holy.

It's going into the kitchen and starting the week fresh and unruffled and clean, giving your best to the work in hand—whether it's washing dishes or writing a book—and not grumbling because life hasn't put you in some other place. It's in being true to your wives, men—in being true to your husbands, wives. It's in making the home bright and sunny and glad all in one. It's in giving to the world sons and daughters who shall be strong and staunch—true to honor and good and love God, because you've taught them what honor and true worth means.

Oh, men and women, it's all of these things, lived twenty-four hours, seven days in every week, that count; that go into the spelling of h-o-l-y, as God spells it, to my way of thinking, and enables one to bring the First day an offering of six days which, laid on God's Sabbath altar, crown it with holiness. It's heart, not words; it's life every day, not one day only, that enters into the holy of holies where we can sit down and say, with the God meaning in heart and soul and life, "Remember the Sabbath day to keep it holy," and feel, in honesty and truth, that we have the approval of the One who uttered the command so many ages ago.



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"Some time ago, I was making an official visit to a distant part of the country and took dinner with one of the merchants of the place. I noticed a somewhat peculiar flavour of the coffee, and asked him concerning it. He replied that it was Postum. I was so pleased with it that, after the meal was over, I bought a package to carry home with me, and had wife prepare some for the next meal; the whole family liked it so well that we discontinued coffee and used Postum entirely."

"I had really been at times very anxious concerning my mother's condition, but we noticed that after using Postum for a short time, she felt so much better than she did prior to its use, and had little trouble with her heart and no sick stomach; that the headaches were not so frequent, and her general condition much improved. This continued until she was as well and hearty as the rest of us."

"I know Postum has benefited myself and the other members of the family, but in a more marked degree in the case of my mother, as she was a victim of long standing."

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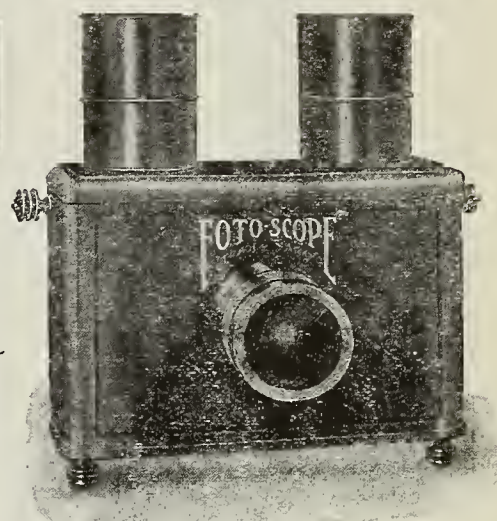
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Trend of Fashion

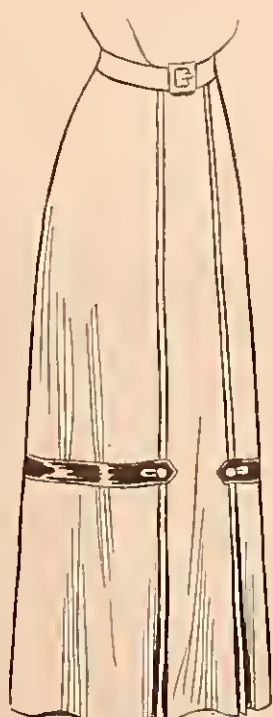
It is a wise woman who familiarizes herself with new touches and changes in each season's fashions. Such points as the cut of the skirt, the shape of a sleeve or the position of the waist-line, either make or mar a whole costume. It is an easy matter these days to buy a ten-cent paper pattern and cut over a large, old-time sleeve into a fashionable, up-to-date small one. And how it changes the appearance of a gown. A really old-fashioned-looking dress is made quite stylish and in the mode.

For this reason, every woman will want to know what the French style specialists have to say of the fall fashions. There is no uncertainty about their edict. They have drawn the line and it is a perpendicular line. To be fashionable, they say, one must present the straight, slim silhouette. That is, skirts are no longer full and plaited all around. They have only a few plaits and they are gracefully held in by bands of the material or of braid. Coats are also cut on straight, slim lines and coat sleeves show few gathers; in fact, almost none at all. Coat collars are broader than those of former years and are often in sailor shape. Coat sleeves are long and so are the sleeves in many of the waists. Blouses with bodice and sleeves cut in one usually have short sleeves finished with a cuff just below the elbow, and the sleeves in dressy waists are in much the same style.

And the waist-line—where is that most important feature of a gown? Very low, very high or just at its normal position? Not at any of these three points to be really fashionable, but just a very little bit above the normal line—just enough, in fact, to make one really graceful. Wide patent-leather belts are worn with shirt-waists and skirts—yes, the separate waist is quite the mode—and very wide girdles of ribbon with the dressy costumes. And then, as is often the case, there is no belt at all, the material of the waist is shirred and then fitted down over the under belt of the skirt.

High stocks are much the vogue this fall and, despite cold weather, the low Dutch collar will continue fashionable through the fall and winter. The low collars are usually outlined with little plaited frills of net, sometimes white and sometimes in a bright tone. A waist, when finished with one of these low collars, usually shows cuffs to match.

The new hats for autumn are much higher than they have been for many seasons past. Puffed velvet crowns are in vogue and wide soft ribbon is much used as a trimming.



No. 1599



No. 1601

No. 1599—Tailored Skirt With Banded Sides
Pattern cut for 24, 26, 28, 30 and 32 inch waist measures. Length of skirt all around, 42 inches. Quantity of material required for medium size, or 28 inch waist, five and one fourth yards of thirty-six-inch material, or four yards of forty-four-inch material.

No. 1601—Plaited Skirt With Foot Band
Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 42 inches. Quantity of material required for medium size, or 26 inch waist, five and one half yards of thirty-six-inch material, or four and one half yards of forty-four-inch material.

The Catalogue is Now Ready

Have you sent in your order for the new fall catalogue of Madison Square patterns? If you have not, it will be wisdom on your part to do it at once. The price of this new catalogue is but four cents. It is full of helpful suggestions for your fall and winter wardrobe. If you want to keep pace with the new fashions, its specially-to-be-recommended features is that each design illustrated, though up to the moment in style, is yet practical and simple, adapted, in fact, to the tastes and needs of every American woman. The price of all the patterns, with the exception of the sets of patterns illustrated in the catalogue, is ten cents.

New Autumn Clothes



No. 1628—Semi-Fitted Coat With Revers Collar

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, three and one half yards of thirty-six-inch material, or two and one half yards of forty-four-inch material.

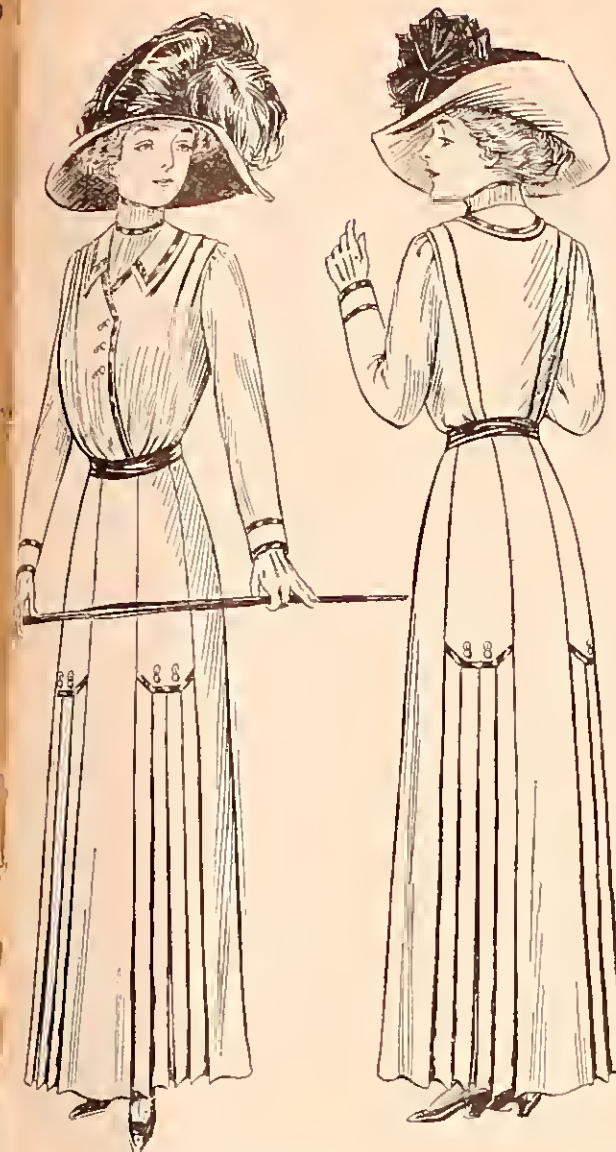


No. 1629—Gored Skirt With Plaited Sides

Pattern cut for 24, 26, 28, 30 and 32 inch waist measures. Length of skirt all around, 40 inches. Quantity of material required for medium size, or 28 inch waist, five and one half yards of thirty-six-inch material, or four and one fourth yards of forty-four-inch material.

This is one of the new, very fashionable skirts which will continue modish all through the winter. It is cut in five gores and made with inverted plaits at the back. At the sides there are four plaits, but to give the straight, rather narrow effect, the plaits are drawn in with a band. The band may be braided to carry out the trimming effect on the coat.

Designs by Miss Gould



No. 1630—Plaited Surplice Waist

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and three fourths yards of thirty-six-inch material, or two and one fourth yards of forty-four-inch material, with three eighths of a yard for tucking.

No. 1631—Eight-Gored Skirt With Plaited Insets

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 40 inches. Quantity of material required for medium size, or 26 inch waist, six and one half yards of thirty-six-inch material, or four and three fourths yards of forty-four-inch material.

Very smart, very new eight-gored skirt shows each alternate gore having a plaited inset, while the top portion of these alternating gores form a tab and button fastening. The woman who finds the scant, plain gored skirt unbecoming, is recommended. In choosing a fabric for this skirt, do not select too heavy a one. The plaited insets are preferable to rough effects.



No. 1588—Tucked Shirt-Waist With Buttoned-Over Yoke

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures.

No. 1589—Plaited Skirt With Side Yoke

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 42 inches.



No. 1590—Surplice Waist With Three-Quarter Sleeves

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures.

No. 1591—Skirt With Plaited Inset

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 42 inches.



No. 1594—Double Blouse Shirred at Waist

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and one fourth yards of twenty-two-inch material, or one and three fourths yards of thirty-six-inch material, with one half yard of all-over lace and two and three fourths yards of twenty-four-inch material for the under-blouse. The specially new feature of this double blouse is that the outside waist is shirred to form a girdle, which, of course, does away entirely with a separate belt or girdle. The under-waist shows at the square-cut neck in the front and also appears again in the little puffed under-sleeves.



The New Fabrics and Colors

EACH new season the fabrics in weave, design and coloring are more beautiful than the season before. This is especially so at the present time.

For tailor-made suits there are two distinct classes of fabrics, both equally fashionable—the smooth-surfaced materials and those of a rough, more or less silky texture. The mannish worsteds are specially modish and are most inconspicuous in design and coloring. Decided stripes and pronounced checks are not used, but broken diagonal effects are in high style, and many invisible checks will be worn. In the rough-surfaced materials, which Paris is specially advocating, are many zibelines with a rough basket weave, also very rough chevrons and serges. Plain cloths and silks will be used for the dressy one-piece costumes.

Silk crepon has come back to fashion again after being out of date for fifteen years or more. It is shown in very fascinating two-color combinations. The new poplin, with a jacquard figure in self-color, is also among the attractive new fabrics, as well as nets and voiles for drapery both for bodice and skirt.

In considering the autumn fashions, color occupies a most important position; in fact, it is second to fabric. Dark costumes, this fall, will have a bright touch of contrasting color introduced oftentimes in their revers or their trimmings. The idea of combining many tones of one color is not nearly so fashionable as it was. The blue suit of rough cheviot, for instance, is quite as apt to have its revers and cuffs in red as in blue. The vogue for bright colors is very notable in a season where black will occupy so prominent a place for the black gown and the black and white gown are style leaders for the autumn.

The colors most fashionable for the fall costumes, whether it is the coat-and-skirt suit or the one-piece dress, are first black, next gray, then any of the new blues or the equally fashionable purple shades. Navy blue is in good style and so is a very, very dark shade, known as corbeau blue. In the purple tones we have the fashionable elderberry and huckleberry, as well as prune, which is especially smart this fall.

The grays show many varieties of tone, and for accessory colors, we have some bright pinks, a shade or two of yellow, and bright green. Gold, brilliant blue and salmon pink will be used for pipings and insets. And then there are the Paisley and East Indian colorings which are decidedly the style.

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Madison Square Patterns

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THE HOUSEHOLD Preserving Grapes for Winter Use

By Elma Iona Locke

GRAPE-JUICE—Take grapes of good flavor, wash and stem them and put on to boil with water to cover. Heat slowly until the grapes are thoroughly cooked, then let them drain (without squeezing) through a cloth for several hours. To each gallon of juice add one pound of granulated sugar, heat until hot, not boiling, then seal in cans or bottle. For use dilute two thirds with water, adding sugar if desired. If the grape-juice becomes "glassy," sometimes a tablespoonful of pure glycerin added to a gallon of juice will overcome this.

GRAPE-BUTTER—Take wild grapes after the frost has ripened them, stem and mash them, and mix with an equal amount of stewed and mashed tart apples. Rub the mixture through a sieve, add half as much sugar as there is pulp and cook until thick, being careful that it does not burn. A very good way is to set preserves and butters into the oven to finish cooking down; there is less danger of burning and no spattering. The oven door should be left open if there is much heat.

MALAGA GRAPES IN PINEAPPLE-JUICE—Wash the grapes and then seed them by making an incision with pointed scissors and removing the seeds with a darning-needle. Put the grapes into a can, wrap the can in a hot, wet cloth or set it in water and fill the can with hot pineapple-juice boiled to a thick syrup with an equal amount of sugar. Let stand overnight, then drain off the syrup and bring to a boil, and again pour it hot over the grapes. The third day boil the syrup until thick, add the grapes, bring to a boil, then seal up in the cans.

CANDIED MALAGA GRAPES—Remove the seeds from the grapes as in the foregoing recipe. Make a syrup of two cupfuls of granulated sugar and one cupful of water, boil until it will hang in long threads from the end of a fork when dipped into it, then put in the grapes, a few at a time, letting them remain from one to two minutes. Then drain them out with a silver fork and spread them on oiled paper to dry.

GREEN-GRAPE JELLY—Take grapes that are well grown, but not beginning to turn, wash and stem them and put in a double boiler or in a stone jar set in a kettle of cold water, place over a hot fire and let boil until the juice is extracted. Strain

off the juice and weigh or measure it, let it boil for ten minutes, add an equal amount of granulated sugar, heated hot in the oven, and boil for ten minutes more, or until it jells when cool.

RIPE-GRAPE JELLY—Select ripe, perfect grapes, wash and stem, put in a porcelain kettle, mash well and heat until soft. Strain off the juice and boil for five minutes, then add three quarters of a pound of sugar to each pint of juice and let boil a few minutes longer, or until it will jell when a little is cooled.

GRAPE-PRESERVES—Make a thick syrup of two pounds of granulated sugar and one pint of water. Wash and stem two pounds of half-ripened grapes, put them into the boiling syrup and cook slowly until clear.

RIPE-GRAPE PRESERVES—Squeeze the pulp from the skins and stew it until the seeds separate, then rub through a sieve add the skins to the pulp and as much sugar as fruit, add a very little water and simmer gently for fifteen minutes. Do not let it boil, or the skins will be tough. Seal while hot in glass jars.

GRAPE-MARMALADE—Use either ripe or green grapes. Stem them and rinse well put into a porcelain kettle with just enough water to keep from sticking and cook for ten minutes. Rub through a sieve, add three fourths as much sugar as pulp and juice, and boil down until of the desired consistency. If quite thick, it will keep without sealing.

PRESERVED GRAPES IN BUNCHES—Select fine bunches and remove the seeds with a pin, breaking the grapes as little as possible. Make a sugar syrup and boil it until nearly ready to "candy." Lay the bunches of grapes in to cover the bottom of the kettle and boil them in the syrup for five minutes. Take out carefully into an earthen pan and pour the syrup over them, cover with paper and leave overnight. The next day drain off the syrup, boil it for five minutes, skimming it well, then put in the grapes and let them boil for a minute or two. Put into jars, pour the syrup over them and seal or tie up closely.

GRAPE SWEET PICKLES—Put ten pounds of grapes, in bunches, into a jar, after removing all loose and imperfect berries. Dissolve six pounds of sugar in one quart of vinegar, add some stick cinnamon and boil until thick, then pour the syrup boiling hot over the grapes and seal up.

PICKLED GRAPES—Stem and wash the grapes, fill a jar with alternate layers of grapes and sugar, and then cover with cold vinegar. Or boil the sugar and vinegar together and pour cold over a jar filled with bunches of grapes.

Renovating Ribbon and Velvet

VELVET or velvet ribbon can be steamed back into smoothness and attractiveness with little labor. Hold the wrong side of the velvet over a kettle of boiling water, so that the steam can fluff the pile of the velvet. If very obstinately creased, a little different method may have to be employed. Turn a hot flat-iron face up; place over the face a cloth wrung out of water, and over this cloth move the wrong side of the velvet back and forth slowly, until the steam has caused the creases to disappear and the pile of the velvet to rise into original shape. Light-colored velvets, if not too soiled, can be cleaned by light-brushing first to remove the dust and then with corn-meal. Repeat the light brushing with the meal until the soil is removed. If this is not effective, a light sponging with gasoline may be more successful. However, never use gasoline where there is a fire, as it is explosive.

Ribbon, if clean and not badly creased, can be smoothed out by quick pressing with a medium-hot iron over tissue paper. If soiled, dip the ribbon in gasoline, spread upon a flat surface and scrub lengthways with a small brush dipped in the gasoline. This should remove any ordinary soil. Rinse thoroughly in clean gasoline, without crumpling the ribbon, and squeeze out surplus gasoline by slipping the ribbon through the fingers flat. Shake the ribbon well for a few minutes, spread smoothly upon a flat surface and allow to thoroughly dry with air. If necessary, later press with a medium-hot iron over tissue paper.



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